



New Jersey Department of Environmental Protection  
Site Remediation Program

REMEDIATION ACTION PERMIT APPLICATION – SOIL

Date Stamp  
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hess Corporation- Port Reading Refinery- AOC-1 the North Landfarm

List All AKAs:

Street Address: 750 Cliff Rd

Municipality: Woodbridge (Township, Borough, or City)

County: Middlesex Zip Code: 07077

Program Interest (PI) Number(s): 006148 Case Tracking Number(s):

SECTION B. PERMIT APPLICATION, MODIFICATION, AND TERMINATION FEES

Select One

- ☒ Remedial Action Permit Application.....\$600.00  
☐ Remedial Action Permit Modification.....\$400.00  
☐ Remedial Action Permit Termination.....\$600.00

SECTION C. FEE BILLING CONTACT PERSON

Business Name: Hess Corporation

Phone: (732) 750-6934

Contact: John Engdahl

Title: Senior Specialist

Mailing Address: One Hess Plaza

City/Town: Woodbridge State: NJ Zip Code: 07095

Email Address: JEngdahl@Hess.com

SECTION D. PERSON RESPONSIBLE FOR CONDUCTING THE REMEDIATION – CO-PERMITTEE

Affiliation/Name of Organization: Hess Corporation

First Name of Contact: John Last Name of Contact: Engdahl

Title: Senior Specialist

Phone Number: (732) 750-6934 Ext: Fax: (732) 750-6105

Mailing Address: One Hess Plaza

City/Town: Woodbridge State: NJ Zip Code: 07095

Email Address: JEngdahl@Hess.com

☒ Primary Responsibility for Permit Compliance

SECTION E. CURRENT OWNER OF THE SITE – CO-PERMITTEE

Affiliation/Name of Organization: Hess Corporation

First Name of Contact: John Last Name of Contact: Engdahl

Title: Senior Specialist

Phone Number: (732) 750-6934 Ext: Fax: (732) 750-6105

Mailing Address: One Hess Plaza

City/Town: Woodbridge State: NJ Zip Code: 07095

Email Address: JEngdahl@Hess.com

☐ Primary Responsibility for Permit Compliance

## SECTION F. DEED NOTICE INFORMATION

1. Attach the following:  
☒ Deed Notice (both in paper and electronically in Adobe PDF format)  
OR  
☐ Deed Notice Termination Document (both in paper and electronically in Adobe PDF format)  
☐ Remedial Action Report (RAR) (electronically only - in Adobe PDF format)
2. Was a GIS compatible map of the Deed Notice sent to [srpgis\\_dn@dep.state.nj.us](mailto:srpgis_dn@dep.state.nj.us)? ☒ Yes ☐ No
3. Deed Notice filing date: Pending
7. Block(s) and Lot(s): 757 and 1
8. Is the entire AOC restricted? ☒ Yes ☐ No  
If "No," what percent of the site is restricted? \_\_\_\_\_ %
9. Is this Deed Notice for Historic Fill material at the site? ☒ Yes ☐ No  
If "Yes," is the Historic Fill material impacting the ground water at the site? ☒ Yes ☐ No  
If "Yes," has the CEA/WRA Permit Fact Sheet Form been submitted to the NJDEP? ☒ Yes ☐ No  
If "No," please attach a completed CEA/WRA Permit Fact Sheet Form to this application.

## SECTION G. FINANCIAL ASSURANCE

1. Did the Deed Notice include an engineering control? ☒ Yes ☐ No  
If "Yes," complete this section, otherwise proceed to the next section (Section I. Receptor Evaluation Summary).
2. Are any of the entities identified in Section D or E exempt from establishing financial assurance pursuant to N.J.A.C. 7:26C-7.10(c)? ☐ Yes ☒ No  
Check the exemption that applies:
- | Person Responsible for Conducting the Remediation – Co-Permittee | Current Owner of the Site – Co-Permittee  |
|--|---|
| <input type="checkbox"/>   | <input type="checkbox"/> Government entity  |
| <input type="checkbox"/>   | <input type="checkbox"/> A person not liable pursuant to the Spill Act that purchased contaminated property before May 7, 2009        |
| <input type="checkbox"/>   | <input type="checkbox"/> A person that conducted remediation at their primary or secondary residence                                  |
| <input type="checkbox"/>   | <input type="checkbox"/> Owner or operator of a child care center   |
| <input type="checkbox"/>   | <input type="checkbox"/> Public school or private school  |
| <input type="checkbox"/>   | <input type="checkbox"/> Owner or operator of a small business responsible for conducting remediation at the location of the business |
3. Is the current owner of the site either a homeowner association or a condominium association pursuant to the New Jersey Common Interest Association Act, N.J.S.A. 46:8A-1 et seq.? ☐ Yes ☒ No  
If "Yes," and the association is identified in Section D and E of this Permit Application, attach a copy of the association's annual budget that includes funds for the operation, maintenance, and monitoring of the engineering control(s) at the site.
4. Identify the estimated cost of operation, maintenance, and monitoring of the engineering control(s) at the site: \$ 113,635.06
5. Is the estimate attached? ☒ Yes ☐ No
6. What is the Financial Assurance Mechanism? (check all that apply)  
☐ Remediation Trust Fund ☒ Line of Credit ☐ Loan or Grant  
☐ Environmental Insurance Policy ☐ Letter of Credit

7. Identify the full amount established as a financial assurance: \$ 113,635.06
8. Contact information at the financial institution for the financial assurance:  
 Financial Institution: Pending  
 First Name of Contact: \_\_\_\_\_ Last Name of Contact: \_\_\_\_\_  
 Mailing Address: \_\_\_\_\_  
 City/Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
 Email Address: \_\_\_\_\_  
 Phone Number: \_\_\_\_\_ Ext: \_\_\_\_\_ Fax: \_\_\_\_\_
9. Attach a copy of the original financial assurance instrument.

#### SECTION H. ENGINEERING CONTROL

1. Current Use for the Engineering Controlled Area (check all that apply)
- |  |   |  |
|--|---|--|
| <input checked="" type="checkbox"/> Industrial | <input type="checkbox"/> Park or Recreational Use | <input type="checkbox"/> Child Care Center |
| <input type="checkbox"/> Residential           | <input type="checkbox"/> Agricultural             | <input type="checkbox"/> Hospital          |
| <input type="checkbox"/> Commercial            | <input type="checkbox"/> Road/Right of Way        | <input type="checkbox"/> Vacant            |
| <input type="checkbox"/> Government Facility   | <input type="checkbox"/> School                   | <input type="checkbox"/> Other _____       |
2. If School or childcare was checked above, is a presumptive remedy being employed (see [http://www.nj.gov/dep/srp/guidance/srra/presumptive\\_remedy\\_guidance\\_DRAFT.pdf](http://www.nj.gov/dep/srp/guidance/srra/presumptive_remedy_guidance_DRAFT.pdf))? ☐ Yes ☐ No  
 If "No," when was the remedy approved by the NJDEP? \_\_\_\_\_
3. Date Engineering Control was installed: pending
4. Identify below the materials used for the engineering control.

Area	Engineering Control Description	Thickness	Units
AOC-1 The North Landfarm	Impermeable Cover	5	Feet
AOC-1 The North Landfarm	Fence	5	Feet

\*Other, describe:

5. In the following table, please list all contaminants that require the use of a Deed Notice/engineering control (attach additional pages if needed).

[illegible]

## SECTION I. RECEPTOR EVALUATION SUMMARY

1. Have any of the following been identified within 200 feet of the site boundary?

Check all that apply.

- ☐ Residences ☐ Public parks and playgrounds
- ☐ Potable wells ☒ Surface water
- ☐ Public and private schools (K-12) ☐ Tier 1 Well-head protection areas
- ☐ Child care facilities ☐ Ecological receptor (e.g., wetlands, pinelands)

2. Have any of these receptors been impacted? ..... ☐ Yes ☒ No

If "Yes," date of Receptor Control: \_\_\_\_\_ Date of IEC Contaminant Source Control: \_\_\_\_\_

3. Have any vapor mitigation systems been installed as a result of this soil contamination? ..... ☐ Yes ☒ No

If "Yes," identify the building(s) and/or structure(s) and vapor mitigation system(s) that is in place (e.g., active or passive). Please attach the Operation, Maintenance, and Monitoring (OMM) Plan for the vapor mitigation system(s) both in paper and electronically (in "MS Word" file format).

**SECTION J. OTHER REMEDIATION PERMITS**Are other Remediation Permits also being applied for or already obtained? ..... ☒ Yes ☐ No

If "Yes," please list the Permit Type, Permit Number and Effective Date for other remediation permits.

Remedial Action Permit- GW- Pending

**SECTION K. PERSON RESPONSIBLE FOR CONDUCTING THE REMEDIATION INFORMATION AND CERTIFICATION**Full Legal Name of the Person Responsible for Conducting the Remediation: Hess CorporationRepresentative First Name: John Representative Last Name: EngdahlTitle: Senior SpecialistPhone Number: (732) 750-6934 Ext: \_\_\_\_\_ Fax: (732) 750-6105Mailing Address: One Hess PlazaCity/Town: Woodbridge State: NJ Zip Code: 07095Email Address: JEngdahl@Hess.com

This certification shall be signed by the person responsible for conducting the remediation who is submitting this notification in accordance with Administrative Requirements for the Remediation of Contaminated Sites rule at N.J.A.C. 7:26C-1.5(a).

*I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, including all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.*

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name/Title: John Engdahl/ Senior SpecialistNo Changes Since Last Submittal ☐**SECTION L. CURRENT OWNER OF THE SITE – CO-PERMITTEE**Full Legal Name of the Person who owns the site: Hess CorporationRepresentative First Name: John Representative Last Name: EngdahlTitle: Senior SpecialistPhone Number: (732) 750-6934 Ext: \_\_\_\_\_ Fax: (732) 750-6105Mailing Address: One Hess PlazaCity/Town: Woodbridge State: NJ Zip Code: 07095Email Address: JEngdahl@Hess.com

This certification shall be signed by the person who owns the site and is submitting this notification in accordance with Administrative Requirements for the Remediation of Contaminated Sites rule at N.J.A.C. 7:26C-1.5(a).

*I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, including all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.*

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name/Title: John Engdahl/ Senior SpecialistNo Changes Since Last Submittal ☐

**SECTION M. LICENSED SITE REMEDIATION PROFESSIONAL INFORMATION AND STATEMENT**LSRP ID Number: 581780First Name: DavidLast Name: CarlsonPhone Number: (609) 387-5553

Ext: \_\_\_\_\_

Fax: (609) 387-5533Mailing Address: 3 Terri Ln, Suite #8City/Town: BurlingtonState: NJZip Code: 08016Email Address: davec@envirotrac.com

*I certify that I am a Licensed Site Remediation Professional authorized pursuant to N.J.S.A. 58:10C to conduct business in New Jersey. As the Licensed Site Remediation Professional of record for this remediation, I:*

**[SELECT ONE OR BOTH OF THE FOLLOWING AS APPLICABLE]:**☐ *directly oversaw and supervised all of the referenced remediation, and/or*☒ *personally reviewed and accepted all of the referenced remediation presented herein.*

*I believe that the information contained herein, and including all attached documents, is true, accurate and complete.*

*It is my independent professional judgment and opinion that the remediation conducted at this site, as reflected in this submission to the Department, conforms to, and is consistent with, the remediation requirements in N.J.S.A. 58:10C-14.*

*My conduct and decisions in this matter were made upon the exercise of reasonable care and diligence, and by applying the knowledge and skill ordinarily exercised by licensed site remediation professionals practicing in good standing, in accordance with N.J.S.A. 58:10C-16, in the State of New Jersey at the time I performed these professional services.*

*I am aware pursuant to N.J.S.A. 58:10C-17 that for purposely, knowingly or recklessly submitting false statement, representation or certification in any document or information submitted to the board or Department, etc., that there are significant civil, administrative and criminal penalties, including license revocation or suspension, fines and being punished by imprisonment for conviction of a crime of the third degree.*

LSRP Signature: \_\_\_\_\_

Date: \_\_\_\_\_

LSRP Name/Title: David J. Carlson/ Senior Project ManagerNo Changes Since Last Submittal ☒Company Name: EnviroTrac Ltd.

Completed forms should be sent to:

Bureau of Case Assignment & Initial Notice  
Site Remediation Program  
NJ Department of Environmental Protection  
401-05H  
PO Box 420  
Trenton, NJ 08625-0420

Financial Assurance Documentation  
As Per USEPA CostPro 6.0

Draft

**Hess Corporation- Port Reading Refinery- AOC- 1 the North  
Landfarm  
P001**

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Address: 750 Cliff Road  
Port Reading  
NEW JERSEY  
07077

Contact: David Carlson or Sarah Dyson  
609-387-5553

Comments: Includes cost of 30-year Monthly Inspection Monitoring, with \$500 annual for repairs or other maintenance, and \$5,327.06 allowed for Final Closure Costs.

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Activity	Units	Closure Cost
Post Closure Care	1	\$113,635.06

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**\$113,635.06**

Additional Costs \$0.00

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Total Estimated Cost **\$113,635.06**

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**Facility:** Hess Corporation- Port  
Reading Refinery- AOC- 1  
the North Landfarm

**Unit:** Unit1

04/25/2013

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### Post-Closure Care Summary (PC\_01-1)

Removal of Leachate (PC-02)	\$0.00	
Site Security (PC-03)	\$0.00	
Maintenance of Vegetative Cover (PC-04)	\$0.00	
Maintenance and Inspection (PC-05)	\$81,244.40	
Groundwater Monitoring(PC-06)	\$0.00	
Deed Notation (PC-07)	\$0.00	
Maintenance and Inspection of Asphalt Cover (PC-8)	\$0.00	
Surface Emission Monitoring (PC-09)	\$0.00	
Gas Extraction System and Perimeter Probe Monitoring (PC-10)	\$0.00	
User Defined Cost (UD-01)	\$0.00	
Subtotal of Post-Closure Costs	\$81,244.40	
Percentage of Engineering Expenses	10.0	%
Engineering Expenses	\$8,124.44	
Certification of Post-Closure (PC-11)	\$5,327.04	
Subtotal	\$94,695.88	
Percentage of Contingency Allowance	20.0	%
Contingency Allowance	\$18,939.18	
<b>TOTAL COST OF POST-CLOSURE CARE</b>	<b>\$113,635.06</b>	

**Facility:** Hess Corporation- Port  
Reading Refinery- AOC- 1  
the North Landfarm

**Unit:** Unit1

04/25/2013

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## Post-Closure Care Rep. and Insp. of Veg. Cover (PC\_05-1)

### MAINTENANCE AND REPAIR OF FINAL COVER

Cost of installing undifferentiated fill	\$0.00	
Cost of installing clay layer	\$0.00	
Cost of installing geomembrane	\$0.00	
Cost of installing drainage layer	\$500.00	
Cost of installing earthen layer	\$0.00	
Cost of installing topsoil	\$0.00	
Cost of installing colloid clay layer	\$0.00	
Total cost of installing final cover	\$500.00	
Maintenance and repair factor	10.0	%
Cost to Maintain and Repair Final Cover	\$50.00	

### POST-CLOSURE CARE INSPECTION

Cost of conducting one inspection	\$225.54	per Inspection
Number of inspections per year	12	Inspections per Year
Cost of conducting post-closure care inspections per year	\$2,706.48	per Year
Number of years in post-closure care period	30	Years
Cost to Conduct Inspections Over the Post-Closure Care Period	\$81,194.40	
TOTAL COST OF REPAIR AND INSPECTION	\$81,244.40	

**Notes:** Represents costs of repair and maintenance of impermeable cap plus 500 annually for necessary repairs.

**Facility:** Hess Corporation- Port  
Reading Refinery- AOC- 1  
the North Landfarm

**Unit:** Unit1

04/25/2013

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**Certification of Completion of Post-Closure Care (PC\_11-1)**

Number of units requiring certification of completion of post-closure care	1	Units
Cost of certification of completion of post-closure care per unit	\$5,327.04	per Unit
TOTAL COST OF CERTIFICATION OF POST-CLOSURE CARE	\$5,327.04	

## Deed Notice

Draft

IN ACCORDANCE WITH N.J.S.A. 58:10B-13, THIS DOCUMENT IS TO BE RECORDED IN THE SAME MANNER AS ARE DEEDS AND OTHER INTERESTS IN REAL PROPERTY.

Prepared by: \_\_\_\_\_  
[Signature]

\_\_\_\_\_  
David J. Carlson on behalf of Hess Corporation- Port Reading

Recorded by: \_\_\_\_\_  
[Signature, Officer of County Recording Office]

\_\_\_\_\_  
[Print name below signature]

#### DEED NOTICE

This Deed Notice is made as of the \_\_\_\_ day of \_\_\_\_, \_\_\_\_, by Hess Corporation of One Hess Plaza, Woodbridge, Middlesex County, New Jersey (together with his/her/its/their successors and assigns, collectively "Owner").

1. **THE PROPERTY.** Hess Corporation of One Hess Plaza, Woodbridge, Middlesex County, New Jersey is the owner in fee simple of certain real property designated as Block(s) 757 Lot 1, on the tax map of the Township of Woodbridge, Middlesex County; the New Jersey Department of Environmental Protection Program Interest Number (Preferred ID) for the contaminated site which includes this property is # 006148 and the property is more particularly described in Exhibit A, which is attached hereto and made a part hereof (the "Property").

2. **REMEDIATION and DEPARTMENTAL OVERSIGHT.**

i. **DEPARTMENT'S ASSIGNED BUREAU.** The Bureau of Case Management is the New Jersey Department of Environmental Protection program that was responsible for the oversight of the remediation of the Property. The area is commonly known as Area of Concern (AOC) 1- the North Landfarm

ii. N.J.A.C. 7:26C-7 requires the Owner, among other persons, to obtain a soil remedial action permit for the soil remedial action at the Property. That permit will contain the monitoring, maintenance and biennial certification requirements that apply to the Property.

3. **SOIL CONTAMINATION.** Hess Corporation has remediated contaminated soil at the Property, such that soil contamination remains in certain areas of the Property that contains contaminants in concentrations that do not allow for the unrestricted use of the Property; this soil

contamination is described, including the type, concentration and specific location of such contaminants, in Exhibit B, which is attached hereto and made a part hereof. As a result, there is a statutory requirement for this Deed Notice and engineering controls in accordance with N.J.S.A. 58:10B-13.

4. CONSIDERATION. In accordance with the remedial action for the site which included the Property, and in consideration of the terms and conditions of that remedial action, and other good and valuable consideration, Owner has agreed to subject the Property to certain statutory and regulatory requirements that impose restrictions upon the use of the Property, to restrict certain uses of the Property, and to provide notice to subsequent owners, lessees and operators of the restrictions and the monitoring, maintenance, and biennial certification requirements outlined in this Deed Notice and required by law, as set forth herein.

5A. RESTRICTED AREAS. Due to the presence of contamination remaining at concentrations that do not allow for unrestricted use, the Owner has agreed, as part of the remedial action for the Property, to restrict the use of certain parts of the Property (the "Restricted Areas"); a narrative description of these restrictions is provided in Exhibit C, which is attached hereto and made a part hereof. The Owner has also agreed to maintain a list of these restrictions on site for inspection by governmental officials.

5B. RESTRICTED LAND USES. The following statutory land use restrictions apply to the Restricted Areas:

i. The Brownfield and Contaminated Site Remediation Act, N.J.S.A. 58:10B-12.g(10), prohibits the conversion of a contaminated site, remediated to non-residential soil remediation standards that require the maintenance of engineering or institutional controls, to a child care facility, or public, private, or charter school without the Department's prior written approval, unless a presumptive remedy is implemented; and

ii. The Brownfield and Contaminated Site Remediation Act, N.J.S.A. 58:10B-12.g(12), prohibits the conversion of a landfill, with gas venting systems and or leachate collection systems, to a single family residence or a child care facility without the Department's prior written approval.

5C. ENGINEERING CONTROLS. Due to the presence and concentration of these contaminants, the Owner has also agreed, as part of the remedial action for the Property, to the placement of certain engineering controls on the Property; a narrative description of these engineering controls is provided in Exhibit C.

6A. CHANGE IN OWNERSHIP AND REZONING.

i. The Owner and the subsequent owners and lessees, shall cause all leases, grants, and other written transfers of an interest in the Restricted Areas to contain a provision expressly requiring all holders thereof to take the Property subject to the restrictions contained herein and to comply with all, and not to violate any of the conditions of this Deed Notice. Nothing

contained in this Paragraph shall be construed as limiting any obligation of any person to provide any notice required by any law, regulation, or order of any governmental authority.

ii. The Owner and the subsequent owners shall provide written notice to the Department of Environmental Protection on a form provided by the Department and available at [www.nj.gov/srp/forms](http://www.nj.gov/srp/forms) within thirty (30) calendar days after the effective date of any conveyance, grant, gift, or other transfer, in whole or in part, of the owner's interest in the Restricted Area.

iii. The Owner and the subsequent owners shall provide written notice to the Department, on a form available from the Department at [www.nj.gov/srp/forms](http://www.nj.gov/srp/forms), within thirty (30) calendar days after the owner's petition for or filing of any document initiating a rezoning of the Property to residential.

6B. SUCCESSORS AND ASSIGNS. This Deed Notice shall be binding upon Owner and upon Owner's successors and assigns, and subsequent owners, lessees and operators while each is an owner, lessee, or operator of the Property.

#### 7A. ALTERATIONS, IMPROVEMENTS, AND DISTURBANCES.

i. The Owner and all subsequent owners and lessees shall notify any person, including, without limitation, tenants, employees of tenants, and contractors, intending to conduct invasive work or excavate within the Restricted Areas, of the nature and location of contamination in the Restricted Areas, and, of the precautions necessary to minimize potential human exposure to contaminants.

ii. Except as provided in Paragraph 7B, below, no person shall make, or allow to be made, any alteration, improvement, or disturbance in, to, or about the Property which disturbs any engineering control at the Property without first obtaining a soil remedial action permit modification pursuant to N.J.A.C. 7:26C-7. Nothing herein shall constitute a waiver of the obligation of any person to comply with all applicable laws and regulations including, without limitation, the applicable rules of the Occupational Safety and Health Administration.

iii. Notwithstanding subparagraph 7Aii., above, a soil remedial action permit modification is not required for any alteration, improvement, or disturbance provided that the owner, lessee or operator:

(A) Notifies the Department of Environmental Protection of the activity by calling the DEP Hotline, at 1-877-WARN-DEP or 1-877-927-6337, within twenty-four (24) hours after the beginning of each alteration, improvement, or disturbance;

(B) Restores any disturbance of an engineering control to pre-disturbance conditions within sixty (60) calendar days after the initiation of the alteration, improvement or disturbance;

(C) Ensures that all applicable worker health and safety laws and regulations are followed during the alteration, improvement, or disturbance, and during the restoration;

(D) Ensures that human exposure to contamination in excess of the remediation standards does not occur; and

(E) Describes, in the next biennial certification the nature of the alteration, improvement, or disturbance, the dates and duration of the alteration, improvement, or disturbance, the name of key individuals and their affiliations conducting the alteration, improvement, or disturbance, a description of the notice the Owner gave to those persons prior to the disturbance.

7B. EMERGENCIES. In the event of an emergency which presents, or may present, an unacceptable risk to the public health and safety, or to the environment, or immediate environmental concern, see N.J.S.A. 58:10C-2, any person may temporarily breach an engineering control provided that that person complies with each of the following:

- i. Immediately notifies the Department of Environmental Protection of the emergency, by calling the DEP Hotline at 1-877-WARNDEP or 1-877-927-6337;
- ii. Hires a Licensed Site Remediation Professional (unless the Restricted Areas includes an unregulated heating oil tank) to respond to the emergency;
- iii. Limits both the actual disturbance and the time needed for the disturbance to the minimum reasonably necessary to adequately respond to the emergency;
- iv. Implements all measures necessary to limit actual or potential, present or future risk of exposure to humans or the environment to the contamination;
- v. Notifies the Department of Environmental Protection when the emergency or immediate environmental concern has ended by calling the DEP Hotline at 1-877-WARNDEP or 1-877-927-6337; and
- vi. Restores the engineering control to the pre-emergency conditions as soon as possible, and provides notification to the Department of Environmental Protection within sixty (60) calendar days after completion of the restoration of the engineering control, including: (a) the nature and likely cause of the emergency; (b) the potential discharges of or exposures to contaminants, if any, that may have occurred; (c) the measures that have been taken to mitigate the effects of the emergency on human health and the environment; (d) the measures completed or implemented to restore the engineering control; and (e) the changes to the engineering control or site operation and maintenance plan to prevent reoccurrence of such conditions in the future.

## 8. TERMINATION OF DEED NOTICE.

i. This Deed Notice may be terminated only upon filing of a Termination of Deed Notice, available at N.J.A.C. 7:26C Appendix C, with the office of the Registry Office of Middlesex County, New Jersey, expressly terminating this Deed Notice.

ii. Within thirty (30) calendar days after the filing of a Termination of Deed Notice, the owner of the property shall apply to the Department for termination of the soil remedial action permit pursuant to N.J.A.C. 7:26C-7.

9. ACCESS. The Owner, and the subsequent owners, lessees and operators agree to allow the Department, its agents and representatives access to the Property to inspect and evaluate the continued protectiveness of the remedial action that includes this Deed Notice and to conduct additional remediation to ensure the protection of the public health and safety and of the environment if the subsequent owners, lessees and operators, during their ownership, tenancy, or operation, and the Owner fail to conduct such remediation pursuant to this Deed Notice as required by law. The Owner, and the subsequent owners and lessees, shall also cause all leases, subleases, grants, and other written transfers of an interest in the Restricted Areas to contain a provision expressly requiring that all holders thereof provide such access to the Department.

#### 10. ENFORCEMENT OF VIOLATIONS.

i. This Deed Notice itself is not intended to create any interest in real estate in favor of the Department of Environmental Protection, nor to create a lien against the Property, but merely is intended to provide notice of certain conditions and restrictions on the Property and to reflect the regulatory and statutory obligations imposed as a conditional remedial action for this site.

ii. The restrictions provided herein may be enforceable solely by the Department against any person who violates this Deed Notice. To enforce violations of this Deed Notice, the Department may initiate one or more enforcement actions pursuant to N.J.S.A. 58:10-23.11, and N.J.S.A. 58:10C, and require additional remediation and assess damages pursuant to N.J.S.A. 58:10-23.11, and N.J.S.A. 58:10C.

11. SEVERABILITY. If any court of competent jurisdiction determines that any provision of this Deed Notice requires modification, such provision shall be deemed to have been modified automatically to conform to such requirements. If a court of competent jurisdiction determines that any provision of this Deed Notice is invalid or unenforceable and the provision is of such a nature that it cannot be modified, the provision shall be deemed deleted from this instrument as though the provision had never been included herein. In either case, the remaining provisions of this Deed Notice shall remain in full force and effect.

#### 12A. EXHIBIT A. Exhibit A includes the following maps of the Property and the vicinity:

i. Exhibit A-1: Vicinity Map - A map that identifies by name the roads, and other important geographical features in the vicinity of the Property (for example, USGS Quad map, Hagstrom County Maps);

ii. Exhibit A-2: Metes and Bounds Description - A tax map of lots and blocks as wells as metes and bounds description of the Property, including reference to tax lot and block numbers for the Property;

iii. Exhibit A-3: Property Map - A scaled map of the Property, scaled at one inch to 200 feet or less, and if more than one map is submitted, the maps shall be presented as overlays, keyed to a base map; and the Property Map shall include diagrams of major surface topographical features such as buildings, roads, and parking lots.

12B. EXHIBIT B. Exhibit B includes the following descriptions of the Restricted Areas:

i. Exhibit B-1: Restricted Area Map - A separate map for each restricted area that includes:

(A) As-built diagrams of each engineering control, including caps, fences, slurry walls, (and, if any) ground water monitoring wells, extent of the ground water classification exception area, pumping and treatment systems that may be required as part of a ground water engineering control in addition to the deed notice

(B) As-built diagrams of any buildings, roads, parking lots and other structures that function as engineering controls; and

(C) Designation of all soil and sediment sample locations within the restricted areas that exceed any soil or sediment standard that are keyed into one of the tables described in the following paragraph.

ii. Exhibit B-2: Restricted Area Data Table - A separate table for each restricted area that includes either (A) or (B) through (F):

(A) Only for historic fill extending over the entire site or a portion of the site and for which analytical data are limited or do not exist, a narrative that states that historic fill is present at the site, a description of the fill material (e.g., ash, cinders, brick, dredge material), and a statement that such material may include, but is not limited to, contaminants such as PAHs and metals;

(B) Sample location designation from Restricted Area map (Exhibit B-1);

(C) Sample elevation based upon mean sea level;

(D) Name and chemical abstract service registry number of each contaminant with a concentration that exceeds the unrestricted use standard;

(E) The restricted and unrestricted use standards for each contaminant in the table; and

(F) The remaining concentration of each contaminant at each sample location at each elevation.

12C. EXHIBIT C. Exhibit C includes narrative descriptions of the institutional controls and engineering controls as follows:

i. Exhibit C-1: Deed Notice as Institutional Control: Exhibit C-1 includes a narrative description of the restriction and obligations of this Deed Notice that are in addition to those described above, as follows:

(A) Description and estimated size of the Restricted Areas as described above;

(B) Description of the restrictions on the Property by operation of this Deed Notice;  
and

(C) The objective of the restrictions.

ii. Exhibit C-2: Impermeable Cap and Fence: Exhibit C-2 includes a narrative description of the Impermeable Cap and Fence as follows:

(A) Description of the engineering control;

(B) The objective of the engineering control; and

(C) How the engineering control is intended to function.

13. SIGNATURES. IN WITNESS WHEREOF, Owner has executed this Deed Notice as of the date first written above.

ATTEST: Hess Corporation

\_\_\_\_\_ By \_\_\_\_\_

\_\_\_\_\_  
John Engdahl

\_\_\_\_\_  
[Signature]

STATE OF NEW JERSEY  
COUNTY OF MIDDLESEX

SS.:

I certify that on \_\_\_\_\_, 20\_\_, John Engdahl personally came before me, and this person acknowledged under oath, to my satisfaction, that:

(a) this person is the designated signee of Hess Corporation the corporation named in this document;

(b) this person is the attesting witness to the signing of this document by the proper corporate officer who is the vice president of the corporation;

(c) this document was signed and delivered by the corporation as its voluntary act and was duly authorized;

(d) this person knows the proper seal of the corporation which was affixed to this document;  
and

(e) this person signed this proof to attest to the truth of these facts.

\_\_\_\_\_  
[Signature]

\_\_\_\_\_  
[Print name and title of attesting witness]

Signed and sworn before me on \_\_\_\_\_, 20\_\_

\_\_\_\_\_, Notary Public

\_\_\_\_\_  
[Print name and title]

## EXHIBIT A

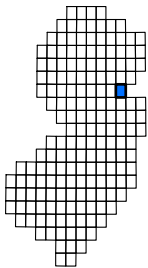
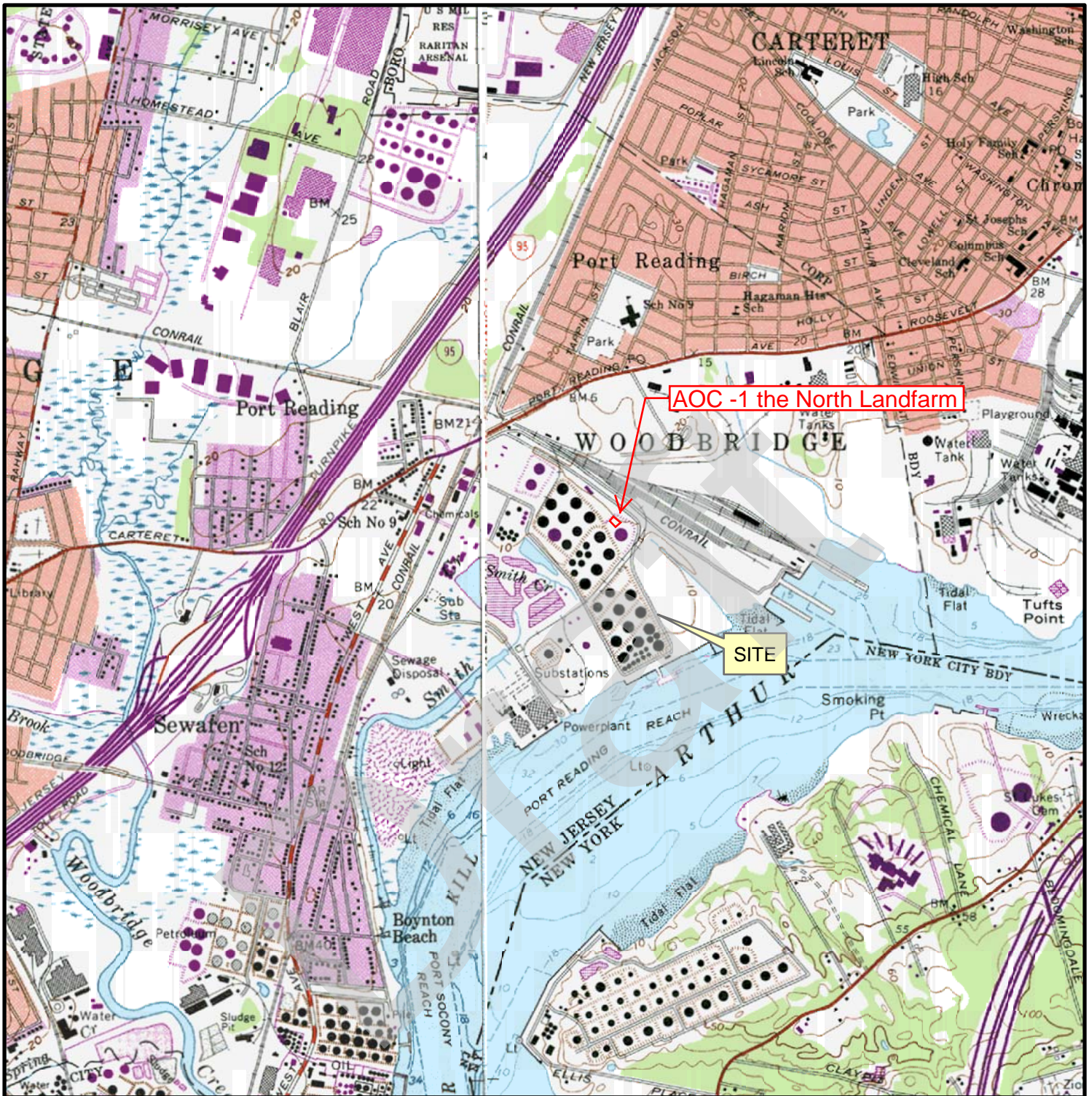
Exhibit A-1: Vicinity Map

Exhibit A-2: Tax Map and Metes and Bounds Description

Exhibit A-3(a): Property Map

Exhibit A-3(b): Detailed Property Map

Draft



QUADRANGLE LOCATION:  
ARTHUR KILL, NEW JERSEY

0 1,000 2,000 4,000 6,000 8,000 Feet



Exhibit  
A-1

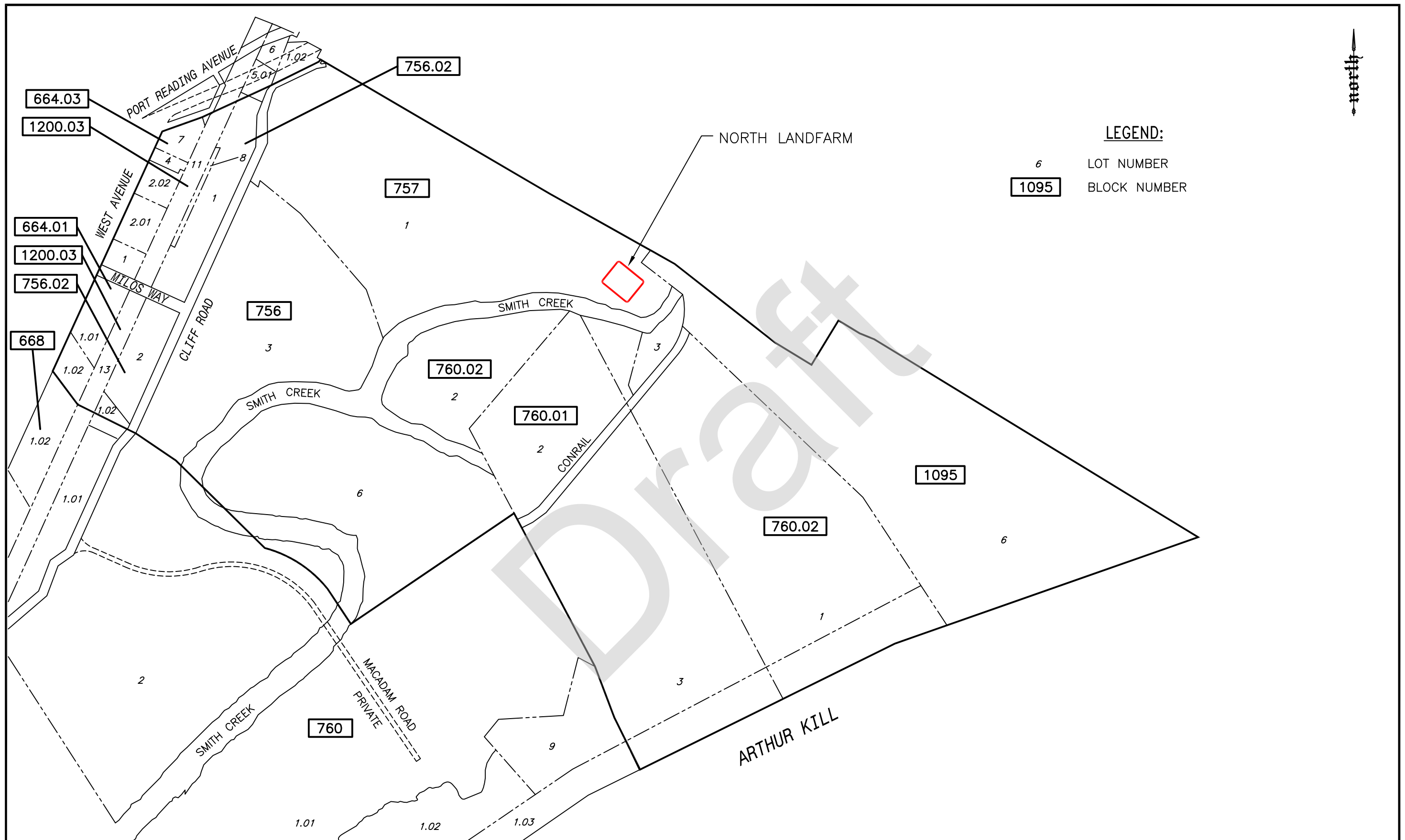
Vicinity Map- AOC-1 The North Landfarm

HESS CORPORATION  
750 CLIFF ROAD  
PORT READING, NEW JERSEY

DRAWN BY: B.J.S.

DATE: 7/15/10

**EnviroTrac**  
ENVIRONMENTAL SERVICES  
400E CORPORATE COURT, So. PLAINFIELD NJ 07080  
PHONE: (908)757-1900 FAX: (908)757-0017



**LEGEND:**

6 LOT NUMBER  
1095 BLOCK NUMBER

EXHIBIT

A-2

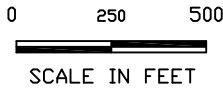
HESS CORPORATION  
750 CLIFF ROAD  
PORT READING, NEW JERSEY



TAX MAP

DRAWN BY: J.M.

REVISION DATE: 4/5/13



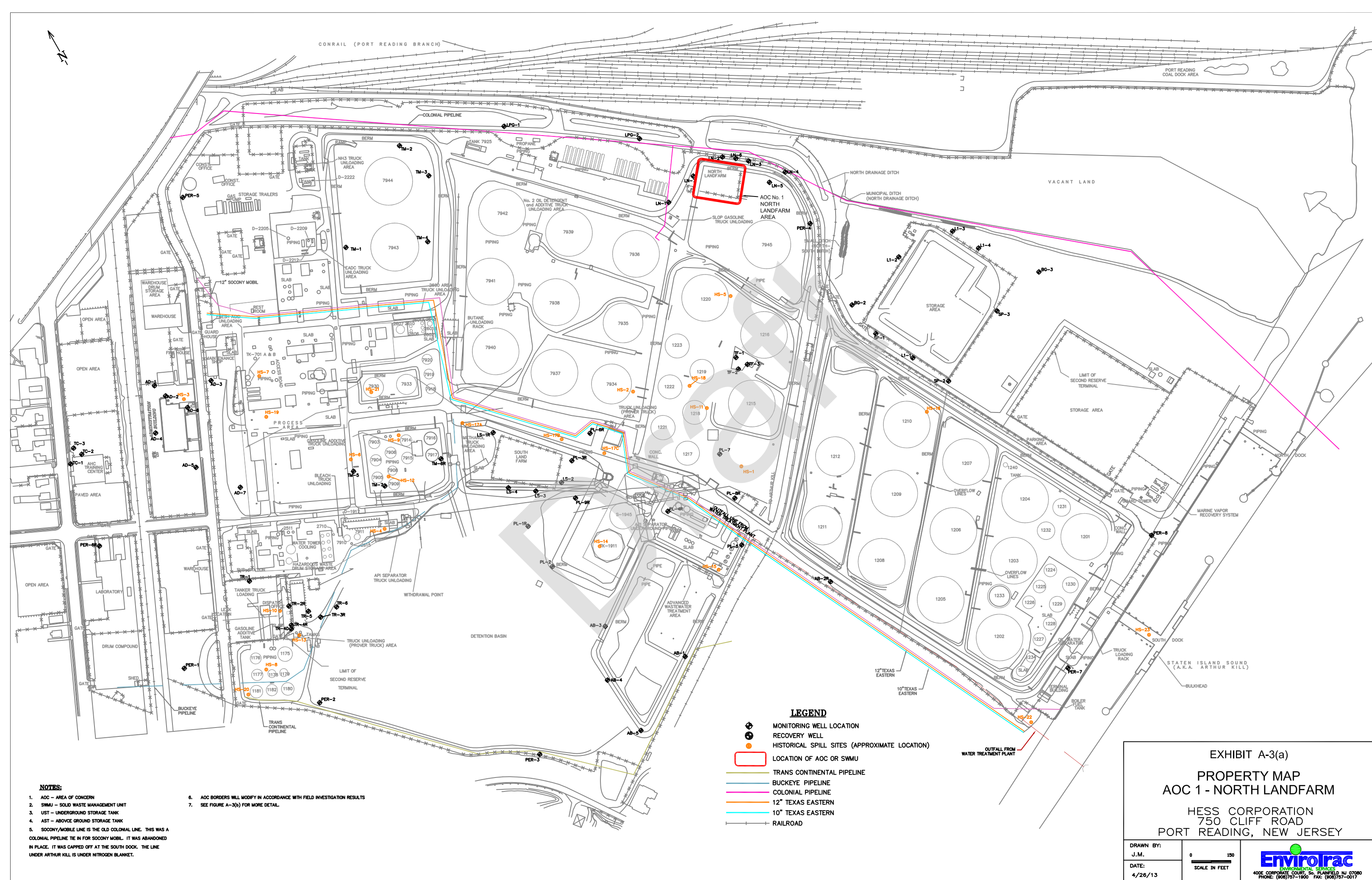
3 TERRI LANE, SUITE #8, BURLINGTON, NJ 08016  
PHONE: (609)387-5553 FAX: (609)387-5533

## **Exhibit A-2: Metes and Bounds**

*ALL that certain tract, lot and parcel of land lying and being in the unincorporated Community of Port Reading, Township of Woodbridge, County of Middlesex and State of New Jersey, being more particularly described as follows:*

*The land referred to in this Commitment is commonly known as Lot 1, Block 757 on the Tax Map, City of Union City, in the County of Hudson.*

*More particularly the parcel of land starting at 40 degrees 33 feet 50.16 inches North; 74 degrees 14 feet 34.34 inches West and continuing 100 feet North-Northeast to 40 degrees 33 feet 50.90 inches North; 74 degrees 14 feet 33.48 inches West, and continuing 145 feet East-Southeast to 40 degrees 33 feet 50.01 inches North; 74 degrees 14 feet 32.09 inches West, and continuing 100 feet South-Southwest to 40 degrees 33 feet 49.27 inches North; 74 degrees 14 feet 32.92 inches West, and continuing 145 feet West-Northwest, to the place whence begun.*



**NOTES:**

1. AOC - AREA OF CONCERN
2. SWMU - SOLID WASTE MANAGEMENT UNIT
3. UST - UNDERGROUND STORAGE TANK
4. AST - ABOVE GROUND STORAGE TANK
5. SOCONY/MOBIL LINE IS THE OLD COLONIAL LINE. THIS WAS A COLONIAL PIPELINE TIE IN FOR SOCONY MOBIL. IT WAS ABANDONED IN PLACE. IT WAS CAPPED OFF AT THE SOUTH DOCK. THE LINE UNDER ARTHUR KILL IS UNDER NITROGEN BLANKET.
6. AOC BORDERS WILL MODIFY IN ACCORDANCE WITH FIELD INVESTIGATION RESULTS
7. SEE FIGURE A-3(b) FOR MORE DETAIL.

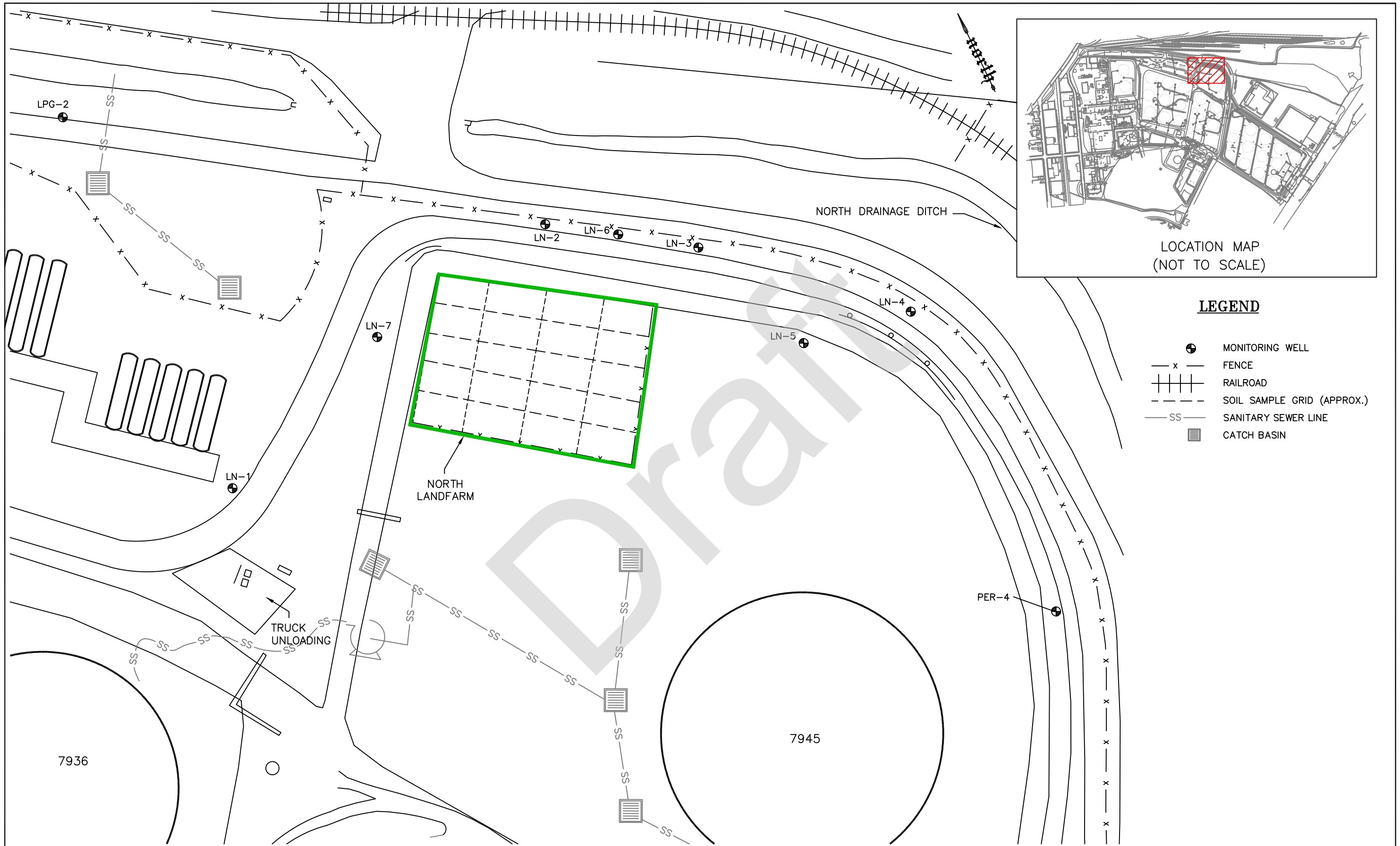
EXHIBIT A-3(a)  
PROPERTY MAP  
AOC 1 - NORTH LANDFARM  
  
HESS CORPORATION  
750 CLIFF ROAD  
PORT READING, NEW JERSEY

DRAWN BY:  
J.M.

DATE:  
4/26/13

0 150  
SCALE IN FEET

ENVIRONMENTAL SERVICES  
400E CORPORATE COURT, 50 PLAINFIELD NJ 07060  
PHONE: (908)757-1900 FAX: (908)757-0017



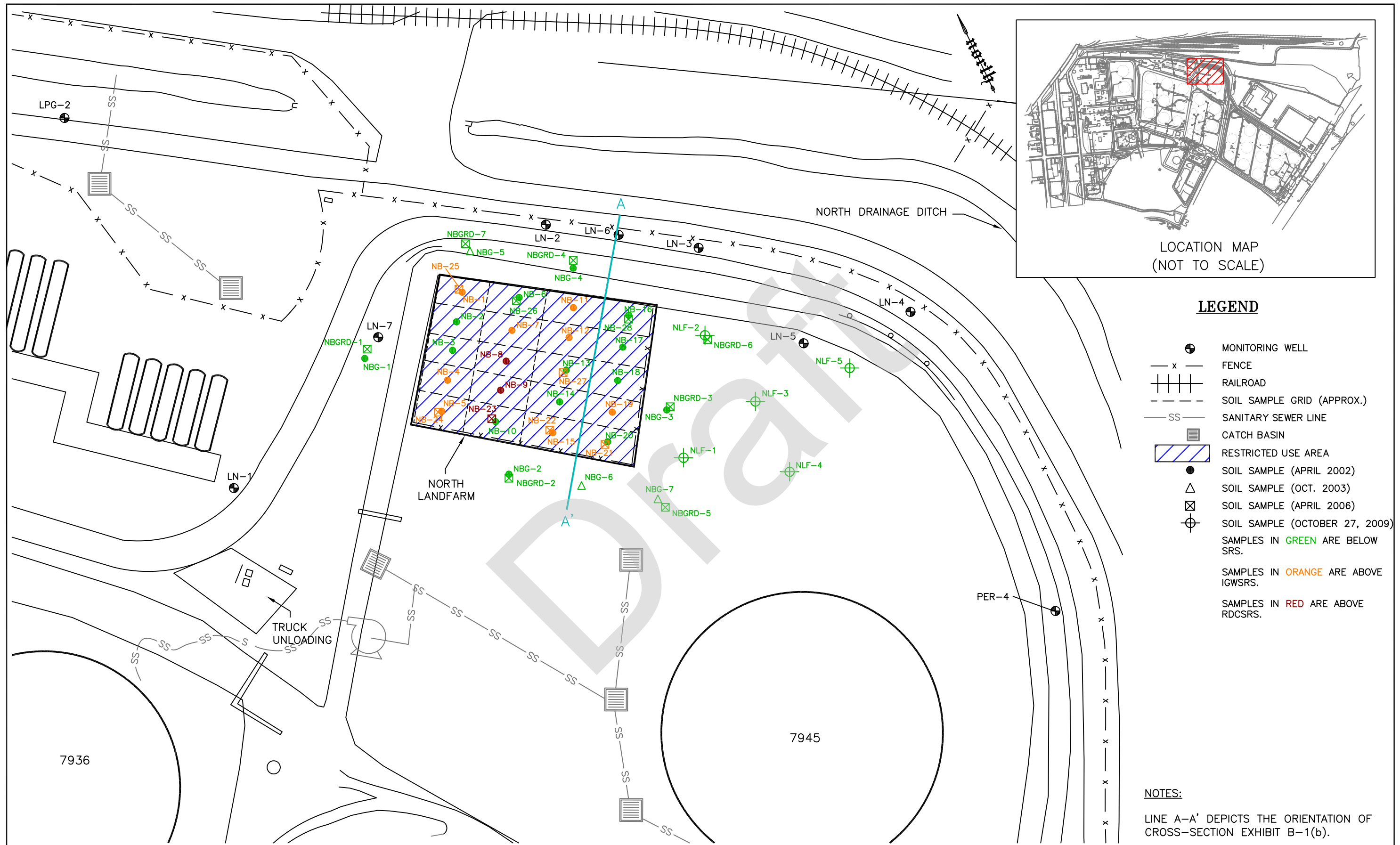
## EXHIBIT B

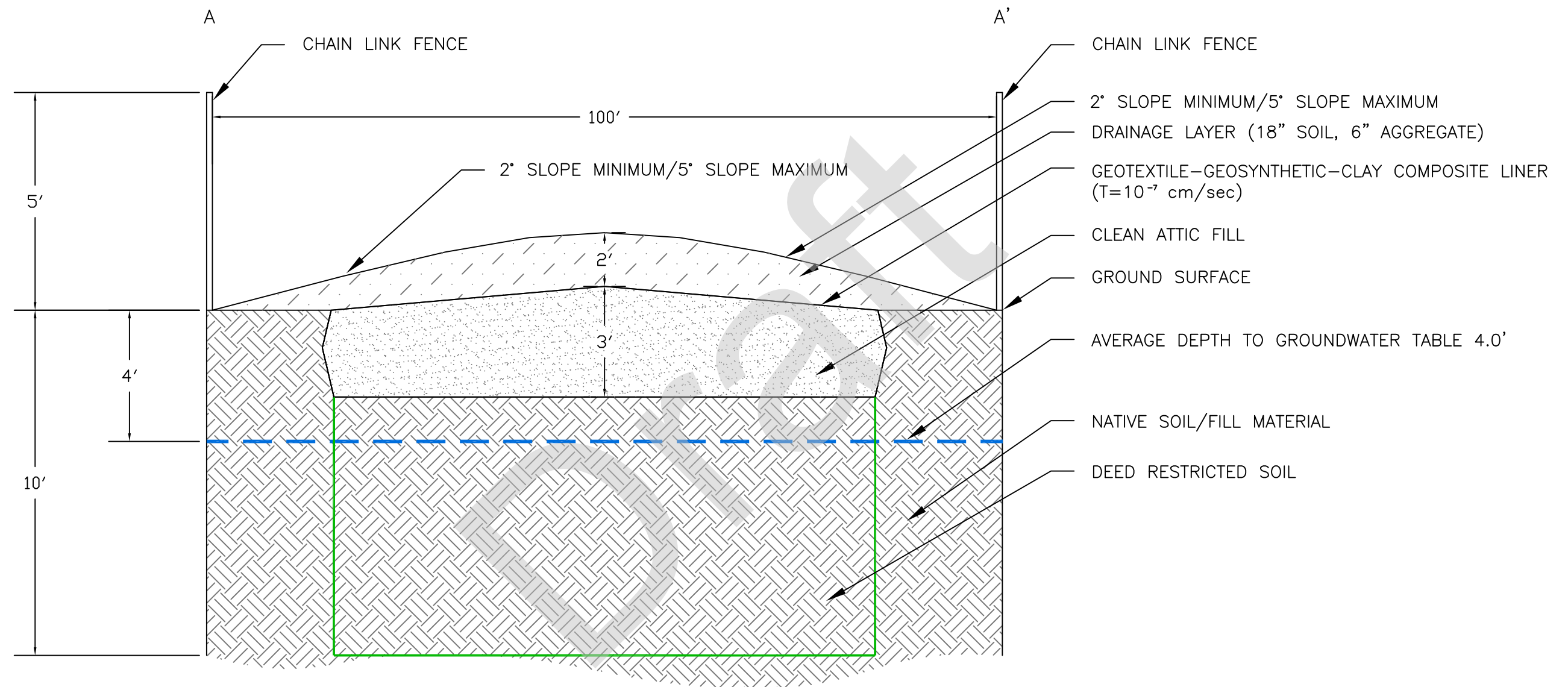
Exhibit B-1(a): Restricted Use Map

Exhibit B-1(b); Restricted Use Map- Engineering Control

Exhibit B-2: Restricted Use Area Data Table

Draft





**Table B-2 Restricted Data Table**  
**North Landfarm History Soil Sampling Analytical Summary**  
**Hess Corporation- Port Reading Refinery**  
**750 Cliff Road**  
**Port Reading, Middlesex County, New Jersey**

Sample Location	Sample Date	Sample Depth (ft)	Approximate Elevation Above mean sea level (msl) in feet	Benzene (CAS # 9072-35-9)	Toluene (CAS # 108-88-3)	Ethylbenzene (CAS # 100-41-4)	Total Xylenes (CAS # 1330-20-7)	Chlorobenzene (CAS # 108-90-7)	Total Petroleum Hydrocarbon Content (TPHC)	Cadmium (CAS # 7440-43-9)	Chromium (CAS # 7440-47-3)	Copper (CAS # 7440-50-8)	Lead (CAS # 7439-92-1)	Nickel (CAS # 7440-02-0)	Zinc (CAS # 7440-66-6)	Cation Exchange Capacity	Oil & Grease	Phenols (CAS # 108-95-2)	Solids %	pH (su)
NRDCSCC			--	13	1,000	1,000	170,000	680	-	100	--	600	600	2,400	1,500	-	-	10,000	-	-
RDCSCC			--	3	1,000	1,000	12,000	37	-	39	--	600	400	250	1,500	-	-	10,000	-	-
IGWSCC			--	1	500	100	67	1	-	--	--	--	--	--	--	-	-	50	-	-
NB-1	4/25/2002	0-2	10-8	ND	ND	0.613	0.329	ND	21,900	0.70	241	245	281	71.9	441	2,490	38,100	<14	89.1	5.99 <sup>b</sup>
		2-4	8-6	ND	ND	2.32	1.07	ND	29,700	0.85	64.3	93.1	93.1	46.9	204	5,530	2,570	<19	65.2	6.61 <sup>b</sup>
		4-6	6-4	0.134 J	0.111 J	5.66	4.27	ND	3,940	<0.60	68.8	269	72.4	81.3	126	2,680	11,500	<14	87.0	6.60 <sup>b</sup>
		6-8	4-2	ND	ND	ND	ND	ND	73.3	<0.58	12.3	17.8	9.2	9.0	29.2	678	<500	<14	86.6	6.23 <sup>b</sup>
		8-10	2-0	0.14	ND	0.509	0.367	ND	785	<0.62	39.2	54.3	46.3	16.1	78.7	1,120	2,800	<15	84.1	6.91 <sup>b</sup>
NB-2	4/25/2002	0-2	10-8	ND	ND	0.911	0.528	ND	18,900	0.69	286	282	285	68.7	429	2,200	31,900	<14	87.0	6.27 <sup>b</sup>
		2-4	8-6	ND	ND	0.278	ND	ND	4,090	<0.55	64.2	79.4	74.2	19.3	118	1,220	6,490	<14	90.6	5.61 <sup>b</sup>
		4-6	6-4	ND	ND	4.18	6.18	ND	2,830	<0.55	55.8	69.1	68.6	17.7	107	1,180	6,140	<13	91.7	5.43 <sup>b</sup>
		6-8	4-2	ND	ND	ND	ND	ND	81.2	0.84	23.5	186	24.7	23.9	74.5	2,760	<500	<15	79.3	5.50 <sup>b</sup>
		8-10	2-0	ND	ND	ND	ND	ND	1,800	1.4	63.3	75.2	131	20.3	111	2,290	4,240	<14	85.0	6.24 <sup>b</sup>
NB-3	4/24/2002	0-2	10-8	ND	ND	ND	0.296	ND	6,770	2.9 <sup>a</sup>	291 <sup>a</sup>	293 <sup>a</sup>	301 <sup>a</sup>	79.6 <sup>a</sup>	411 <sup>a</sup>	1,920	18,200	<14	89.7	5.12 <sup>b</sup>
		2-4	8-6	ND	ND	4.53 <sup>a</sup>	7.15 <sup>a</sup>	ND	16,100	1.0	95.6	84.6	110	25.2	173	1,090	25,600	<13	93.2	6.91 <sup>b</sup>
		4-6	6-4	ND	ND	3.64 <sup>a</sup>	3.63 <sup>a</sup>	ND	7,150	0.84	66.6	62.1	63.6	18.7	110	946	7,970	<13	96.6	6.52 <sup>b</sup>
		6-8	4-2	ND	ND	ND	ND	ND	ND	0.57	25.2	10.6	5.3	7.4	32.3	697	<500	<13	91.5	5.55 <sup>b</sup>
		8-10	2-0	ND	ND	ND	ND	ND	55.0	<0.56	8.5	7.5	3.7	6.8	22.5	648	<500	<14	89.0	6.22 <sup>b</sup>
NB-4	4/24/2002	0-2	10-8	ND	ND	15.2 <sup>a</sup>	16.6 <sup>a</sup>	ND	23,700	0.55	291	322	341	99.9	590	2,070	47,700	<14	90.8	6.21 <sup>b</sup>
		2-4	8-6	ND	ND	1.16 <sup>a</sup>	0.574 <sup>a</sup>	ND	5,840	<0.68	51.0	84.9	75.7	21.4	106	7,410	5,160	<18	71.0	5.60 <sup>b</sup>
		4-6	6-4	ND	ND	12.5 <sup>a</sup>	11.5 <sup>a</sup>	ND	6,620	<0.54	97.7	85.5	87.9	25.7	154	1,040	9,890	<14	92.0	5.48 <sup>b</sup>
		6-8	4-2	ND	ND	ND	ND	ND	ND	<0.52	8.3	6.6	2.7	5.9	21.9	891	<500	<13	93.5	5.12 <sup>b</sup>
		8-10	2-0	ND	ND	ND	ND	ND	1,530	<0.53	34.5	33.5	27.4	13.5	77.3	920	3,720	<14	90.3	6.22 <sup>b</sup>
NB-5	4/24/2002	0-2	10-8	ND	ND	14.2 <sup>a</sup>	10.2 <sup>a</sup>	ND	4,070	<0.56	280	278	307	67.5	448	826	38,800	<14	88.7	6.51 <sup>b</sup>
		2-4	8-6	ND	ND	0.157	ND	ND	2,420	<0.51	14.2	13.9	13.1	7.6	26.4	716	4,760	<13	96.8	5.87 <sup>b</sup>
		4-6	6-4	ND	ND	0.497	ND	ND	5,230	<0.54	86.0	84.3	86.7	22.6	154	1,140	15,700	<13	93.2	7.99 <sup>b</sup>
		6-8	4-2	ND	ND	ND	ND	ND	86.2	<0.60	13.6	24.5	7.2	7.7	54.4	1,480	<500	<15	82.3	6.56 <sup>b</sup>
		8-10	2-0	ND	ND	ND	ND	ND	2,070	<0.54	28.8	28.3	24.5	12.0	80.0	1,270	2,650	<14	85.9	6.84 <sup>b</sup>
NB-6	4/25/2002	0-2	10-8	0.14	ND	0.509	0.367	ND	785	<0.65	39.2	54.3	46.3	16.1	78.7	1,120	2,800	<15	82.3	6.91 <sup>b</sup>
		2-4	8-6	ND	ND	0.262	ND	ND	3,610	<0.56	74.2	87.7	136	23.8	109	4,530	5,000	<15	83.3	6.87 <sup>b</sup>
		4-6	6-4	ND	ND	ND	ND	ND	343	0.85	92.8	134	112	37.8	224	7,950	509	4.2	62.8	5.34 <sup>b</sup>
		6-8	4-2	ND	ND	ND	ND	ND	297	<0.53	15.6	17.9	19.1	9.7	31.1	1,150	<500	<2.8	89.3	6.59 <sup>b</sup>
		8-10	2-0	ND	ND	ND	ND	ND	74.5	<0.62	14.5	18.0	13.6	11.7	37.6	731	<500	<15	82.1	6.59 <sup>b</sup>
NB-7	4/25/2002	0-2	10-8	ND	ND	17.2	5.11	ND	14,800	0.78	238	349	273	58.6	478	2,490	29,200	16.5	85.4	6.46 <sup>b</sup>
		2-4	8-6	0.355	0.0921	8.96	14.1	ND	4,970	<0.68	30.4	42.8	29.5	23.8	83.7	2,960	8,260	<13	86.4	6.90 <sup>b</sup>
		4-6	6-4	ND	ND	ND	ND	ND	5,480	<0.78	138	169	178	45.8	295	3,740	7,680	<17	70.8	7.03 <sup>b</sup>
		6-8	4-2	ND	ND	ND	ND	ND	56.5	<1.1	38.8	18.6	16.7	26.6	80.0	9,180	584	<23	52.4	7.79 <sup>b</sup>
		8-10	2-0	ND	ND	0.341	ND	ND	958	<1.0	46.6	48.2	38.3	27.6	97.5	8,260	1,060	<23	53.7	7.66 <sup>b</sup>

**Table B-2 Restricted Data Table**  
**North Landfarm History Soil Sampling Analytical Summary**  
**Hess Corporation- Port Reading Refinery**  
**750 Cliff Road**  
**Port Reading, Middlesex County, New Jersey**

Sample Location	Sample Date	Sample Depth (ft)	Approximate Elevation Above mean sea level (msl) in feet	Benzene (CAS # 9072-35-9)	Toluene (CAS # 108-88-3)	Ethylbenzene (CAS # 100-41-4)	Total Xylenes (CAS # 1330-20-7)	Chlorobenzene (CAS # 108-90-7)	Total Petroleum Hydrocarbon Content (TPHC)	Cadmium (CAS # 7440-43-9)	Chromium (CAS # 7440-47-3)	Copper (CAS # 7440-50-8)	Lead (CAS # 7439-92-1)	Nickel (CAS # 7440-02-0)	Zinc (CAS # 7440-66-6)	Cation Exchange Capacity	Oil & Grease	Phenols (CAS # 108-95-2)	Solids %	pH (su)
NRDCSCC			--	13	1,000	1,000	170,000	680	-	100	-	600	600	2,400	1,500	-	-	10,000	-	-
RDCSCC			--	3	1,000	1,000	12,000	37	-	39	-	600	400	250	1,500	-	-	10,000	-	-
IGWSCC			--	1	500	100	67	1	-	-	-	-	-	-	-	-	-	50	-	-
NB-8	4/25/2002	0-2	10-8	3.88	0.528	51.5	20.6	ND	24,300	1.1 <sup>a</sup>	323	378	397	83.3	671	2,870	41,600	<14	87.2	7.34 <sup>b</sup>
		2-4	8-6	0.542	0.115 J	14.3	20	ND	20,900	<0.56	255	246	430	59.4	490	1,400	43,700	<14	89.7	7.30 <sup>b</sup>
		4-6	6-4	2.96 <sup>a</sup>	3.86 <sup>a</sup>	32.2 <sup>a</sup>	30.5 <sup>a</sup>	ND	9,740	<0.53	109	124	141	34.2	289	1,240	47,500	<13	93.8	7.38 <sup>b</sup>
		6-8	4-2	ND	ND	ND	ND	ND	35.2	<0.55	7.0	10	3.8	6.1	18.5	831	<500	<13	90.4	5.85 <sup>b</sup>
		8-10	2-0	ND	ND	ND	ND	ND	ND	<0.58	9.5	8.9	3.7	9.2	25.9	627	<500	<14	85.7	6.07 <sup>b</sup>
NB-9	4/24/2002	0-2	10-8	ND	ND	7.08 <sup>a</sup>	5.49 <sup>a</sup>	ND	28,700	<0.56	305	307	381	73.6	540	2,480	42,500	<14	88.9	6.42 <sup>b</sup>
		2-4	8-6	3.05 <sup>a</sup>	ND	51.2 <sup>a</sup>	52.9 <sup>a</sup>	ND	12,700	<0.61	113	169	146	46.1	498	8,680	17,800	<16	76.3	6.87 <sup>b</sup>
		4-6	6-4	ND	ND	20.8 <sup>a</sup>	25.4 <sup>a</sup>	ND	5.28	<0.61	204	259	302	86.6	488	3,480	27,600	<16	78.5	7.22 <sup>b</sup>
		6-8	4-2	ND	ND	ND	ND	ND	ND	<0.54	10.1	12.5	10.5	7.5	25.0	900	<500	<14	89.1	6.72 <sup>b</sup>
		8-10	2-0	ND	ND	ND	ND	ND	509	<0.60	13.3	11.1	9.2	7.7	27.4	716	541	<14	85.2	6.25 <sup>b</sup>
NB-10	4/24/2002	0-2	10-8	ND	ND	2.36 <sup>a</sup>	ND	ND	14,300	<0.56	229	230	236	61.9	361	2,170	32,200	<14	88.2	6.59 <sup>b</sup>
		2-4	8-6	ND	ND	0.466 <sup>a</sup>	0.54 <sup>a</sup>	ND	4,420	<0.55	48.1	53.8	43.4	18.8	109	900	7,240	<13	94.7	6.91 <sup>b</sup>
		4-6	6-4	ND	ND	ND	ND	ND	4,760	<0.58	57.4	48.9	61.2	22.1	94.3	1,050	6,590	<14	90.1	7.11 <sup>b</sup>
		6-8	4-2	ND	ND	ND	ND	ND	37.8	<0.57	11.5	11.7	6.5	7.3	20.2	1,240	<500	<14	88.9	5.44 <sup>b</sup>
		8-10	2-0	ND	ND	ND	ND	ND	1,380	<0.53	22.0	26.5	16.0	9.0	35.2	888	2,710	<14	89.7	7.71 <sup>b</sup>
NB-11	4/25/2002	0-2	10-8	0.0938 J	ND	2.09	0.47	ND	25,100	<0.60	9.7	10.8	6.0	9.0	24.6	2,980	30,300	<15	80.4	6.62 <sup>b</sup>
		2-4	8-6	ND	ND	0.534	ND	ND	462	<0.60	220	225	280	62.0	462	3,470	<500	<15	83.2	5.58 <sup>b</sup>
		4-6	6-4	0.181	ND	6.86	0.379	ND	3,380	<0.60	18.6	31.4	21.3	14.3	57.5	3,010	6,330	<15	83.5	5.76 <sup>b</sup>
		6-8	4-2	ND	ND	ND	ND	ND	42.9	<0.63	8.2	8.3	4.7	6.4	19.1	1,040	1,160	<14	87.8	5.90 <sup>b</sup>
		8-10	2-0	ND	ND	ND	ND	ND	286	<0.55	16.6	16.0	16.9	9.8	34.9	997	942	<15	85.6	6.31 <sup>b</sup>
NB-12	4/25/2002	0-2	10-8	ND	ND	1.78	ND	ND	17,000	<0.69	231	199	265	54.8	365	2,610	43,300	<15	80.7	5.80 <sup>b</sup>
		2-4	8-6	ND	ND	2.34	0.574	ND	13,200	<0.62	97.5	110	136	31.3	176	1,960	14,800	<14	86.3	6.55 <sup>b</sup>
		4-6	6-4	ND	ND	1.75	0.760	ND	3,020	<0.57	53.6	62.6	67.9	18.2	95.3	1,150	9,690	<14	87.4	6.44 <sup>b</sup>
		6-8	4-2	ND	ND	8.04 <sup>a</sup>	ND	ND	2,420	0.83	48.1	163	91.7	22.1	134	6,090	3,070	<18	69.3	7.48 <sup>b</sup>
		8-10	2-0	0.868 <sup>a</sup> J	ND	23 <sup>a</sup>	7.21 <sup>a</sup>	ND	2,000	2.2	95.9	362	219	36.0	280	9,420	3,120	<22	56.2	7.71 <sup>b</sup>
NB-13	4/25/2002	0-2	10-8	ND	ND	2.68	0.352 J	ND	12,900	0.65	265	269	320	77.2	500	3,050	22,200	<14	86.5	6.15
		2-4	8-6	ND	ND	ND	ND	ND	ND	<0.53	10.0	11.3	10.0	7.7	23.1	1,880	<500	<13	94.3	5.81 <sup>b</sup>
		4-6	6-4	ND	ND	0.176	ND	ND	7,690	<0.58	83.0	76.9	86.6	22.0	129	1,990	20,700	<14	86.8	6.30 <sup>b</sup>
		6-8	4-2	ND	ND	ND	ND	ND	241	<0.54	19.7	13.7	7.0	12.2	39.7	748	573	<14	90.9	6.62 <sup>b</sup>
		8-10	2-0	ND	ND	ND	ND	ND	3,200	<0.55	44.7	30.1	25.4	12.6	60.0	1,770	1,260	<14	89.9	6.66 <sup>b</sup>
NB-14	4/24/2002	0-2	10-8	ND	ND	3.79 <sup>a</sup>	ND	ND	29,200	<0.52	304	269	299	70.5	448	982	51,600	<13	89.6	6.65 <sup>b</sup>
		2-4	8-6	ND	ND	6.89 <sup>a</sup>	4.54 <sup>a</sup>	ND	5,440	<0.53	49.9	44.8	51.0	15.6	124	952	10,300	<13	92.4	7.31 <sup>b</sup>
		4-6	6-4	ND	ND	ND	ND	ND	7,330	<0.59	107	101	119	26.3	210	2,470	22,300	<14	85.5	6.83 <sup>b</sup>
		6-8	4-2	ND	ND	ND	ND	ND	ND	<0.76	26.2	54.1	43.8	19.2	91.5	3,740	1,010	<19	64.8	7.45 <sup>b</sup>
		8-10	2-0	ND	ND	0.821	0.591	ND	2,180	<0.64	36.0	50.5	45.4	14.5	75.5	2,620	3,010	<15	79.1	7.07 <sup>b</sup>

**Table B-2 Restricted Data Table**  
**North Landfarm History Soil Sampling Analytical Summary**  
**Hess Corporation- Port Reading Refinery**  
**750 Cliff Road**  
**Port Reading, Middlesex County, New Jersey**

Sample Location	Sample Date	Sample Depth (ft)	Approximate Elevation Above mean sea level (msl) in feet	Benzene (CAS # 9072-35-9)	Toluene (CAS # 108-88-3)	Ethylbenzene (CAS # 100-41-4)	Total Xylenes (CAS # 1330-20-7)	Chlorobenzene (CAS # 108-90-7)	Total Petroleum Hydrocarbon Content (TPHC)	Cadmium (CAS # 7440-43-9)	Chromium (CAS # 7440-47-3)	Copper (CAS # 7440-50-8)	Lead (CAS # 7439-92-1)	Nickel (CAS # 7440-02-0)	Zinc (CAS # 7440-66-6)	Cation Exchange Capacity	Oil & Grease	Phenols (CAS # 108-95-2)	Solids %	pH (su)
NRDCSCC			--	13	1,000	1,000	170,000	680	-	100	-	600	600	2,400	1,500	-	-	10,000	-	-
RDCSCC			--	3	1,000	1,000	12,000	37	-	39	-	600	400	250	1,500	-	-	10,000	-	-
IGWSCC			--	1	500	100	67	1	-	-	-	-	-	-	-	-	-	50	-	-
NB-15	4/24/2002	0-2	10-8	ND	ND	14.5 <sup>a</sup>	23.3 <sup>a</sup>	ND	23,100	<0.60	296	248	281	65.5	446	2,300	42,700	<14	89.8	6.98 <sup>b</sup>
		2-4	8-6	ND	ND	5.08 <sup>a</sup>	8.86 <sup>a</sup>	ND	17,100	<0.74	184	190	187	74.9	291	4,530	30,600	<17	73.7	7.52 <sup>b</sup>
		4-6	6-4	ND	ND	ND	ND	ND	3,260	<0.57	48.9	48.8	49.8	17.9	97.3	1,240	<500	<14	90.7	7.37 <sup>b</sup>
		6-8	4-2	ND	ND	ND	ND	ND	45.8	<0.62	8.1	12.6	6.6	7.1	24.1	943	<500	<14	86.8	6.68 <sup>b</sup>
		8-10	2-0	ND	ND	ND	ND	ND	53.6	<0.59	10.0	8.8	5.7	6.7	21.2	485	10,300	<15	82.7	5.99 <sup>b</sup>
NB-16	4/25/2002	0-2	10-8	ND	ND	ND	ND	ND	286	<0.58	16.6	16.0	16.9	9.8	34.9	997	942	<14	87.5	6.31 <sup>b</sup>
		2-4	8-6	ND	ND	ND	ND	ND	561	<0.50	29.8	32.6	29.8	10.1	57.0	1,030	1,120	<13	93.0	5.39 <sup>b</sup>
		4-6	6-4	ND	ND	ND	ND	ND	323	<0.56	18.2	16.3	9.9	8.8	36.5	1,130	656	<13	94.1	5.62 <sup>b</sup>
		6-8	4-2	ND	ND	ND	ND	ND	99.4	<0.55	7.6	11.2	4.7	6.0	16.7	580	<500	<14	87.0	5.51 <sup>b</sup>
		8-10	2-0	ND	ND	ND	ND	ND	79.1	<0.57	10.8	12.2	5.9	6.3	21.2	618	<500	<14	88.9	5.63 <sup>b</sup>
NB-17	4/25/2002	0-2	10-8	ND	ND	0.641	0.382	ND	9,220	<0.57	138	117	142	36.1	228	1,830	18,300	<14	90.2	6.26 <sup>b</sup>
		2-4	8-6	ND	ND	ND	ND	ND	18.4	<0.55	11.0	6.6	5.3	6.4	20.3	717	<500	<13	93.1	5.12 <sup>b</sup>
		4-6	6-4	ND	ND	ND	ND	ND	1,880	<0.53	42.8	34.0	29.1	14.7	62.2	978	5,540	<14	90.0	5.87 <sup>b</sup>
		6-8	4-2	ND	ND	ND	ND	ND	20.1	<0.53	9.2	7.2	3.0	6.3	25.1	807	561	<14	89.2	5.91 <sup>b</sup>
		8-10	2-0	ND	ND	ND	ND	ND	402	<0.60	21.1	17.1	14.1	9.5	36.6	650	739	<14	88.5	5.65 <sup>b</sup>
NB-18	4/25/2002	0-2	10-8	ND	ND	ND	ND	ND	5,600	0.93	164	174	202	47.1	310	5,960	35,500	<16	78.8	5.99 <sup>b</sup>
		2-4	8-6	ND	ND	ND	ND	ND	88.9	<0.60	23.3	41.0	31.4	16.7	61.5	3,470	<500	<15	82.5	7.97 <sup>b</sup>
		4-6	6-4	ND	ND	0.903	0.734	ND	2,210	<0.62	54.1	55.3	46.9	21.2	89.0	5,690	2,940	<13	80.7	7.54 <sup>b</sup>
		6-8	4-2	ND	ND	ND	ND	ND	ND	<0.57	8.9	7.2	2.4	7.1	20.3	743	<500	<14	86.7	6.63 <sup>b</sup>
		8-10	2-0	ND	ND	ND	ND	ND	ND	<0.56	11.3	7.5	3.2	9.3	28.1	773	<500	<13	89.4	6.30 <sup>b</sup>
NB-19	4/25/2002	0-2	10-8	0.156	ND	2.21	1.09	ND	15,600	<0.53	257	229	305	57.3	412	1,590	49,000	<14	90.4	7.31 <sup>b</sup>
		2-4	8-6	ND	ND	6.00 <sup>a</sup>	7.64 <sup>a</sup>	ND	7,650	<0.55	47.6	43.4	43.3	12.3	91.5	804	8,620	<13	93.8	7.55 <sup>b</sup>
		4-6	6-4	ND	ND	8.85 <sup>a</sup>	9.92 <sup>a</sup>	ND	11,300	1.2	151	126	134	36.5	227	1,800	16,800	<14	89.2	7.43 <sup>b</sup>
		6-8	4-2	ND	ND	ND	ND	ND	51.9	<0.62	19.5	36.8	17.0	16.3	73.6	1,190	<500	<15	81.9	5.24 <sup>b</sup>
		8-10	2-0	ND	ND	ND	ND	ND	511	1.0	40.0	122	76.1	24.9	127	6,330	<500	<19	66.9	6.59 <sup>b</sup>
NB-20	4/24/2002	0-2	10-8	ND	ND	3.17	5.06	ND	29,500	<0.54	292	225	344	53.9	427	1,980	44,300	<13	90.6	7.08 <sup>b</sup>
		2-4	8-6	ND	ND	ND	ND	ND	10,200	<0.59	106	100	109	30.5	198	2,120	13,600	<14	89.9	7.81 <sup>b</sup>
		4-6	6-4	ND	ND	1.65 <sup>a</sup>	2.45 <sup>a</sup>	ND	8,460	<0.58	60.1	77.3	56.3	23.1	117	4,050	13,700	<15	81.7	7.62 <sup>b</sup>
		6-8	4-2	ND	ND	ND	ND	ND	65.5	<0.59	11.4	9.4	5.4	8.3	22.4	691	<500	<13	90.1	6.22 <sup>b</sup>
		8-10	2-0	ND	ND	ND	ND	ND	20.3	<0.58	7.9	8.2	5.0	8.4	31.1	585	507	<14	87.3	5.75 <sup>b</sup>

**Table B-2 Restricted Data Table**  
**North Landfarm History Soil Sampling Analytical Summary**  
**Hess Corporation- Port Reading Refinery**  
**750 Cliff Road**  
**Port Reading, Middlesex County, New Jersey**

Sample Location	Sample Date	Sample Depth (ft)	Approximate Elevation Above mean sea level (msl) in feet	Benzene (CAS # 9072-35-9)	Toluene (CAS # 108-88-3)	Ethylbenzene (CAS # 100-41-4)	Total Xylenes (CAS # 1330-20-7)	Chlorobenzene (CAS # 108-90-7)	Total Petroleum Hydrocarbon Content (TPHC)	Cadmium (CAS # 7440-43-9)	Chromium (CAS # 7440-47-3)	Copper (CAS # 7440-50-8)	Lead (CAS # 7439-92-1)	Nickel (CAS # 7440-02-0)	Zinc (CAS # 7440-66-6)	Cation Exchange Capacity	Oil & Grease	Phenols (CAS # 108-95-2)	Solids %	pH (su)
NRDCSCC			--	13	1,000	1,000	170,000	680	-	100	-	-	600	2,400	1,500	-	-	10,000	-	-
RDCSCC			--	3	1,000	1,000	12,000	37	-	39	-	600	400	250	1,500	-	-	10,000	-	-
IGWSCC			--	1	500	100	67	1	-	-	-	-	-	-	-	-	-	50	-	-
NBG-1	4/26/2002	0-2	11-9	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2-4	9-7	ND	ND	ND	ND	ND	45.8	<0.56	32.8	38.3	8.5	24.7	25.0	5,080	<500	<15	82.6	6.73 <sup>b</sup>
		4-6	7-5	ND	ND	ND	ND	ND	28.9	<0.57	21.8	36.6	5.7	24.3	38.0	3,210	<500	<15	87.8	6.59 <sup>b</sup>
		6-8	5-3	ND	ND	ND	ND	ND	15.9	<0.51	10.0	7.5	4.2	6.0	18.3	5,140	<500	<14	89.2	4.45 <sup>b</sup>
		8-10	3-1	ND	ND	ND	ND	ND	16.1	<0.55	8.3	6.3	3.6	7.8	29.5	936	<500	<13	94.2	6.34 <sup>b</sup>
NBG-2	4/26/2002	0-2	9-7	ND	ND	ND	ND	ND	20.1	<0.52	10.6	10.3	5.3	9.3	28.6	1,010	<500	<14	90.9	5.96 <sup>b</sup>
		2-4	7-5	ND	ND	ND	ND	ND	227	0.87	31.8	61.1	34.4	18.6	74.3	1,830	828	<14	80.5	7.42 <sup>b</sup>
		4-6	5-3	ND	ND	ND	ND	ND	31.1	<0.63	14.0	12.1	6.5	8.2	25.0	4,590	<500	<15	83.2	7.12 <sup>b</sup>
		6-8	3-1	ND	ND	ND	ND	ND	282	<0.58	14.9	21.3	10.6	9.3	33.8	10,500	<500	<15	81.5	7.57 <sup>b</sup>
		8-10	1- (-1)	ND	ND	0.132 J	ND	ND	369	0.69	30.9	111	63.3	17.3	95.7	5,800	538	<15	79.1	8.52 <sup>b</sup>
NBG-3	4/26/2002	0-2	9-7	ND	ND	ND	ND	ND	74.4	<0.66	19.9	36.0	47.4	16.8	101	11,100	<500	<15	82.4	4.46 <sup>b</sup>
		2-4	7-5	ND	ND	ND	ND	ND	33.4	<0.67	16.5	22.9	10.7	15.0	41.3	5,950	<500	<16	78.3	3.96 <sup>b</sup>
		4-6	5-3	ND	ND	ND	ND	ND	26.3	<0.67	38.6	19.4	16	10.2	39.2	8,800	<500	<16	77.8	4.71 <sup>b</sup>
		6-8	3-1	ND	ND	ND	ND	ND	61.2	<0.69	15.5	20.9	15.7	12.8	43.2	6,320	<500	<17	74.2	7.58 <sup>b</sup>
		8-10	1- (-1)	ND	ND	ND	ND	ND	45.0	<0.58	14.9	10.5	5.3	7.2	23.8	1,500	<500	<14	86.2	5.69 <sup>b</sup>
NBG-4	4/26/2002	0-2	12-10	ND	ND	ND	ND	ND	88.4	0.65	68.1	46.4	22.3	12.7	50.8	3,270	<500	<14	89.5	7.51 <sup>b</sup>
		2-4	10-8	ND	ND	ND	ND	ND	137	<0.67	20.5	32.0	21.1	12.2	33.7	3,960	<500	<15	82.9	6.84 <sup>b</sup>
		4-6	8-6	ND	ND	ND	ND	ND	61.0	<0.54	14.9	28.5	17.3	11.7	39.0	3,350	<500	<14	88.5	6.98 <sup>b</sup>
		6-8	6-4	ND	ND	ND	ND	ND	94.8	0.68	45.2	38.1	11.8	10.7	43.3	6,650	1,000	<14	83	5.65 <sup>b</sup>
		8-10	4-2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
NBG-5	10/8/2003	0-2	11-9	ND	ND	ND	ND	ND	169	<0.58	15.0	22.3	12.7	8.3	26.7	3,690	529	<15	84.1	6.33 <sup>b</sup>
		2-4	9-7	ND	ND	ND	ND	ND	48.5	<0.56	11.9	24.1	11.5	8.8	27.3	2,610	<500	<14	88.1	6.06 <sup>b</sup>
		4-6	7-5	ND	ND	ND	ND	ND	87.9	<1.2	38.7	76.6	23.5	20.6	73.9	13,600	<500	<29	42.0	7.00 <sup>b</sup>
		6-8	5-3	ND	ND	ND	ND	ND	43.2	<0.57	7.0	7.0	6.4	6.1	23.5	2,330	<500	<14	85.8	7.00 <sup>b</sup>
		8-10	3-1	ND	ND	ND	ND	ND	34.4	<0.65	23.7	23.1	20.2	19.0	71.5	1,490	720	<16	75.2	5.99 <sup>b</sup>
NBG-6	10/8/2003	0-2	9-7	ND	ND	ND	ND	ND	111	<0.58	22.5	47.0	39.7	15.7	75.2	3,410	510	<14	87.0	6.32 <sup>b</sup>
		2-4	7-5	ND	ND	ND	ND	ND	211	0.76	55.4	121	61.8	28.1	130	2,850	660	<16	76.5	8.01 <sup>b</sup>
		4-6	5-3	ND	ND	ND	ND	ND	1,570	<0.57	8.1	14.7	8.6	6.1	17.1	998	2,380	<14	86.3	7.00 <sup>b</sup>
		6-8	3-1	ND	ND	ND	ND	ND	238	<0.58	7.8	8.6	6.5	5.7	17.4	864	595	<14	87.4	7.00 <sup>b</sup>
		8-10	1- (-1)	ND	ND	ND	ND	ND	46.7	<0.59	7.4	12.5	6.7	7.5	21.3	1,010	<500	<14	85.4	6.39 <sup>b</sup>
NBG-7	10/8/2003	0-2	10-8	ND	ND	ND	ND	ND	46.8	<0.54	10.1	13.5	19.7	8.6	34.2	1,430	<500	<13	90.5	7.81 <sup>b</sup>
		2-4	8-6	ND	ND	ND	ND	ND	35.9	<0.58	10.8	11.9	5.7	11.2	34.2	1,630	<500	<15	83.9	5.43 <sup>b</sup>
		4-6	6-4	ND	ND	ND	ND	ND	245	1.4	47.5	114	54.9	24.6	114	2,370	<500	<16	80.0	7.90 <sup>b</sup>
		6-8	4-2	ND	ND	ND	ND	ND	61.5	<0.60	10.9	20.2	9.1	8.4	33.6	1,360	<500	<15	83.1	7.67 <sup>b</sup>
		8-10	2-0	ND	ND	ND	ND	ND	214	0.84	41.1	156	91.1	22.6	138	2,960	581	<15	80.1	8.32 <sup>b</sup>

**Notes:**

All samples in mg/kg unless otherwise noted.

NRDCSCC - Non-Residential Direct Contact Soil Cleanup Criteria

RDCSCC - Residential Direct Contact Soil Cleanup Criteria

IGWSCC - Impact to Ground Water Soil Cleanup Criteria (Default)

- Sample Above NRDCSCC  
- Sample Above RDCSCC but Below NRDCSCC  
- Sample Above IGWSCC but Below NRDCSCC and RDCSCC

<sup>a</sup>-Elevated Detection Limit due to dilution required for matrix interference

<sup>b</sup>-Sample received and analyzed out of holding time for pH

NA - Not Analyzed

NS - Not Sampled

ND - Not Detected

J- Estimated Value

B-2 Restricted Use Area Data Table  
Hess Corporation- Port Reading Refinery  
750 Cliff Road  
Port Reading, Middlesex County, New Jersey  
North Landfarm Soil Sampling Summary Table

Sample Location	Sample Date	Sample Depth	Elevation above Mean Sea Level	Volatile Organics							Base Neutrals																												
				Acetone (CAS # 67-64-1)	Benzene (CAS # 9072-35-9)	Carbon disulfide (CAS # 75-15-4)	Ethylbenzene (CAS # 100-41-4)	Toluene (CAS # 108-88-3)	Xylene (total) (CAS # 1330-20-7)	Total TIC, Volatile	2,4-Dimethylphenol (CAS # 105-67-9)	Acenaphthene (CAS # 83-32-9)	Acenaphthylene (CAS # 208-96-8)	Anthracene (CAS # 120-12-7)	Benzo[a]anthracene (CAS # 56-55-3)	Benzo[b]pyrene (CAS # 50-32-6)	Benzo[k]fluoranthene (CAS # 205-99-2)	Benzo[ghi]perylene (CAS # 191-24-2)	Benzo[k]fluoranthene (CAS # 207-08-9)	Butyl Benzyl Phthalate (CAS # 85-68-7)	Carbazole (CAS # 86-74-8)	Chrysene (CAS # 218-01-9)	Dibenz[a,h]anthracene (CAS # 53-70-8)	Dibenzofuran (CAS # 132-64-9)	1,2-Dichlorobenzene (CAS # 95-50-1)	2,4-Dichlorobenzene (CAS # 121-14-2)	Di-n-octylphthalate (CAS # 117-84-0)	Diethylhexylphthalate (CAS # 117-81-7)	Fluoranthene (CAS # 206-44-0)	Fluorene (CAS # 86-73-7)	Indene(1,2,3-c)pyrene (CAS # 193-39-5)	2-Methylnaphthalene (CAS # 91-57-6)	Naphthalene (CAS # 91-20-3)	Phenanthrene (CAS # 85-01-8)	Pyrene (CAS # 129-00-0)	1,2,4-Trichlorobenzene (CAS # 120-42-1)	Total TIC, Semi-Volatile		
NRDCSCC				--	1000	13	--	1,000	1,000	1,000	--	10,000	10,000	--	10,000	4	0.66	4	--	4	10,000	--	40	0.66	--	10,000	4	10,000	210	10,000	10,000	4	--	4,200	--	10,000	1,200	--	
RDCSCC				--	1000	3	--	1,000	1,000	410	--	1,100	3,400	--	10,000	0.9	0.66	0.9	--	0.9	1,100	--	9	0.66	--	5,100	1	1,100	49	2,300	2,300	0.9	--	230	--	1,700	68	--	
IGWSCC				--	100	1	--	100	500	67	--	10	100	--	100	500	100	50	--	500	100	--	500	100	--	50	10	100	100	100	100	500	--	100	--	100	100	--	
NB-21	4/24/2006	0-2 (10-8)	ND	1.73 <sup>a</sup>	ND	15.1 <sup>b</sup>	0.692 <sup>b</sup>	26.8 <sup>b</sup>	447 (10) J	ND	7.93	ND	1.37	1.08	0.731	0.621	0.627	0.223 J	0.336 J	1.11	3.18	0.240 J	4.21	ND	ND	ND	4.6	1.67	14.5	0.335 J	127.0 <sup>b</sup>	36.6 <sup>b</sup>	47.6 <sup>b</sup>	5.08	ND	294.4 (25) J			
		2-4 (8-6)	ND	0.215	ND	ND	ND	0.0659 J	8.79 (10) J	ND	0.0255 J	0.023 J	0.0958	0.106	0.0974	0.0865	0.0657 J	0.0654 J	ND	ND	0.145	ND	ND	ND	0.306	0.248	0.0191 J	0.0539 J	0.0681 J	0.0267 J	0.0455 J	0.266	ND	4.55 (17) J					
		4-6 (6-4)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.09 (3) J			
		6-8 (4-2)	ND	ND	ND	0.0496 J	ND	0.079 J	ND	ND	ND	ND	0.0222 J	0.0431 J	0.0442 J	0.0367 J	0.0287 J	0.0312 J	ND	ND	0.0426 J	ND	ND	ND	ND	ND	0.0783	ND	0.0295 J	ND	ND	0.0784	0.0793	ND	3.27 (2) J				
		8-10 (2-0)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11.01 (3) J			
NB-22	4/24/2006	0-2 (10-8)	0.218 J	0.147	ND	0.277	ND	0.381	10.15 (10) J	ND	0.0617 J	ND	0.0756 J	0.0907	0.0781 J	0.068 J	0.0597 J	0.0519 J	ND	ND	0.126	ND	0.0492 J	ND	ND	ND	0.271	0.202	0.167	0.0445 J	0.767	0.20	0.415	0.275	ND	29.2 (25) J			
		2-4 (8-6)	ND	1.19 <sup>b</sup>	ND	15.9 <sup>b</sup>	ND	20.9 <sup>b</sup>	537 (10) J	0.230	1.27 <sup>c</sup>	ND	1.83 <sup>c</sup> J	0.178	0.107	0.0978	0.0985	0.0414 J	0.0591 J	ND	0.545	0.0338 J	0.564	0.0676 J	ND	0.368	0.288	2.11	0.0485 J	95.9 <sup>d</sup>	29.2 <sup>d</sup>	40.5 <sup>d</sup>	0.857	ND	43.6 (25) J				
		4-6 (6-4)	ND	ND	ND	ND	ND	ND	ND	3.0 (10) J	ND	0.0208 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0454 J	ND	0.170	ND	0.131	ND	ND	15.33 (25) J			
		6-8 (4-2)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.95 (3) J			
		8-10 (2-0)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.03 (6) J		
NB-23	4/24/2006	0-2 (10-8)	1.95 J	ND	ND	20.1	ND	17.8	774 (10) J	0.971	6.83	0.997 <sup>c</sup> J	1.15	1.06	0.688	0.638	0.696	0.299 J	0.332 J	ND	2.97	0.199 J	3.33	0.233 J	ND	ND	3.1	2.4	11.5	0.35 J	110 <sup>d</sup>	38.4 <sup>d</sup>	45.5 <sup>d</sup>	5.02	ND	356.4 (25) J			
		2-4 (8-6)	ND	ND	ND	0.0359 J	ND	0.0337 J	40.2 (10) J	ND	0.404	0.105	0.132	0.578 J	0.0323 J	0.0257 J	0.0332 J	ND	0.0879	ND	0.102	ND	0.276	ND	0.321 <sup>d</sup> J	ND	0.284	0.155	1.23	ND	5.59 <sup>d</sup>	1.13	2.54	0.129	ND	115.4 (25) J			
		4-6 (6-4)	ND	ND	ND	ND	ND	ND	ND	ND	0.666	ND	0.189 J	0.140 J	0.0819 J	0.939 J	ND	ND	ND	ND	0.322 J	ND	0.426	ND	ND	ND	0.570	0.236 J	1.71	ND	9.32	3.16	4.30	0.62	ND	221.5 (25) J			
		6-8 (4-2)	ND	0.0437 J	ND	2.26	0.0556	2.13	119.3 (10) J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.610 (1) J		
		8-10 (2-0)	ND	ND	ND	ND	ND	ND	ND	ND	0.0397 J	ND	0.0173 J	ND	ND	ND	ND	ND	ND	ND	ND	0.0251 J	ND	0.0269 J	ND	ND	ND	0.0535 J	0.0193 J	0.116	ND	0.418	0.890	0.306	0.0478 J	ND	17.92 (25) J		
NB-24	4/24/2006	0-2 (10-8)	ND	0.144 J	ND	6.46	0.181 J	4.09	307 (10) J	1.19	4.55	ND	0.786	0.988	0.633	0.557	0.608	0.284 J	ND	ND	3.14	0.142 J	3.28	0.176 J	ND	ND	2.5	1.8	13.3	0.316 J	83.8 <sup>d</sup>	22.0 <sup>d</sup>	48.8 <sup>d</sup>	4.09	ND	376.7 (25) J			
		2-4 (8-6)	ND	ND	ND	ND	ND	ND	ND	ND	0.0709 J	0.0319 J	0.0157 J	ND	ND	ND	ND	ND	ND	0.0434 J	ND	0.0334 J	ND	0.0519 J	ND	ND	0.223	0.0189 J	0.21	ND	0.943	0.302 J	0.494	0.0583 J	ND	33.82 (25) J			
		4-6 (6-4)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		6-8 (4-2)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.291 J	ND	ND	ND	ND	ND	ND	0.0388 J	ND	ND	ND	ND	ND	0.0717 J	ND	0.92 (2) J		
		8-10 (2-0)	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.048 J	0.0684 J	0.230	0.172	0.170	0.0427 J	0.179	ND	ND	0.198	0.0755 J	ND	ND	ND	ND	0.151	0.589	ND	0.0413 J	ND	0.0251 J	ND	0.0458 J	0.503	101.9 (25) J			
NB-25	4/24/2006	0-2 (10-8)	ND	0.279 J	ND	4.89	ND	5.22	345 (10) J	ND	8.17	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.54	ND	ND	ND	ND	ND	6.16	2.12	15.9	ND	49.0	18.9	34.5	5.03	ND	2.092 (25) J			
		2-4 (8-6)	ND	ND	0.0501 J	0.131	ND	0.0399 J	56.9 (10) J	ND	4.26	ND	3.06	0.887	0.472	1.28	ND	ND	ND	ND	1.9	ND	ND	ND	ND	ND	4.04	1.68	8.12	ND	95.1 <sup>d</sup>	38.7 <sup>d</sup>	21.0 <sup>d</sup>	2.88 <sup>d</sup>	ND	431 (25) J			
		4-6 (6-4)	0.367 J	ND	ND	ND	ND	ND	ND	ND	ND	0.0305 J	0.0513 J	0.0733 J	0.0751 J	0.193	0.0678 J	0.0631 J	ND	ND	0.0747 J	0.0965 J	0.326 J	ND	ND	ND	0.208	0.0208 J	0.0581 J	ND	0.0893 J	0.171	ND	41.44 (7) J					
		6-8 (4-2)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0285 J	0.0489 J	0.0347 J	ND	ND	0.0285 J	ND	ND	0.0476 J	ND	ND	ND	ND	ND	0.0823	0.0728 J	ND	0.0243 J	ND	ND	78.9	ND	2.34 (10) J				
		8-10 (2-0)	ND	ND	ND	ND	ND	ND	ND	ND	0.0433 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0311 J	ND	ND	ND	ND	ND	ND	0.0164 J	0.0943	ND	0.558	0.174	247	0.0493 J	ND	23.32 (25) J			
NB-26	4/26/2006	0-2 (11-9)	ND	ND	ND	1.08 <sup>a</sup>	ND	0.605 <sup>a</sup> J	399 (10) J	ND	ND	ND	0.759 <sup>a</sup>	0.402 <sup>a</sup> J	ND	ND	ND	ND	ND	ND	1.09 <sup>a</sup>	ND	ND	ND	ND	ND	2.5 <sup>a</sup>	0.586 <sup>a</sup> J	5.59 <sup>a</sup>	ND	ND	ND	ND	16.1 <sup>a</sup>	2.33 <sup>a</sup>	ND	1.260 (25) J		
		2-4 (9-7)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0198 J	0.017 J	ND	1.35 (4) J
		4-6 (7-5)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0157 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.45 (4) J	
		6-8 (5-3)																																					

B-2 Restricted Use Area Data Table  
Hess Corporation- Port Reading Refinery  
750 Cliff Road  
Port Reading, Middlesex County, New Jersey  
North Landfarm Soil Sampling Summary Table

Sample Location	Sample Date	Sample Depth	General																Metals																PCBs		Pesticides				
			Solids, Percent	pH (su) <sup>a</sup>	Ammonia (CAS # 7664-41-7)	Cyanide (CAS # 74-90-8)	Aluminum (CAS # 7429-90-5)	Antimony (CAS # 7440-36-0)	Arsenic (CAS # 7440-38-2)	Barium (CAS # 7440-39-3)	Beryllium (CAS # 7440-41-7)	Cadmium (CAS # 7440-49-9)	Calcium (CAS # 7440-47-3)	Chromium (CAS # 7440-47-3)	Cobalt (CAS # 7440-48-4)	Copper (CAS # 7440-50-9)	Iron (CAS # 7439-89-6)	Lead (CAS # 7439-92-1)	Magnesium (CAS # 7439-95-4)	Manganese (CAS # 7439-96-5)	Mercury (CAS # 7439-97-6)	Nickel (CAS # 7440-02-0)	Potassium (CAS # 7440-09-7)	Selenium (CAS # 7782-49-2)	Silver (CAS # 7440-22-4)	Sodium (CAS # 7440-23-5)	Thallium (CAS # 7440-28-0)	Vanadium (CAS # 7440-62-2)	Zinc (CAS # 7440-66-6)	Aroclor 1254 (CAS # 11097-69-1)	4,4'-DDD (CAS # 72-54-8)	4,4'-DDE (CAS # 72-55-9)	4,4'-DDT (CAS # 50-29-3)	Heptachlor Epoxide (CAS # 1024-57-3)							
NRDCSCC			--	--	--	21,000	--	340	20	47,000	2	100	--	--	--	600	--	600	--	--	270	2,400	--	3,100	4,100	--	2	7,100	1,500	2	12	9	8	--							
RDCSCC			--	--	--	1,100	--	14	20	700	2	39	--	--	--	600	--	400	--	--	14	250	--	63	110	--	2	370	1,500	0.49	3	2	2	--							
IGWSCC			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	50	50	50	500	--							
NB-21	4/24/2006	0-2	90.8	7.33	14.5	<0.25	3,300	<2.2	10.8	99.3	<0.55	<0.55	1,700	177	7.4	140	56,500	165	1,060	360	2.1	63.2	641	<2.2	<1.1	<550	<1.1	16.4	256	0.630	ND	ND	ND	ND							
		2-4	83.1	7.60	25.8	<0.28	5,510	<2.3	5.8	32.6	<0.58	<0.58	<580	15.1	7.9	20.4	18,600	8.4	1,920	102	0.15	15.8	1,510	<2.3	<1.2	<580	<1.2	18.8	40.2	ND	0.0062	0.0141	ND	ND							
		4-6	83.3	5.97	2.0	<0.27	3,710	<2.5	3.3	<25	<0.62	<0.62	<620	9.2	<6.2	6.1	11,900	4.1	1,260	55.8	<0.035	8.6	1,120	<2.5	<1.2	<620	<1.1	13.9	18.0	ND	ND	ND	ND	ND							
		6-8	86.5	5.77	1.5	<0.28	4,720	<2.3	5.3	<23	<0.57	<0.57	<570	10.2	<5.7	9.8	13,100	5.1	1,530	62.3	<0.034	9.7	1,410	<2.3	<1.1	<570	<1.1	15.6	31.7	ND	0.0029	ND	ND	ND							
		8-10	88.4	5.67	1.6	<0.26	4,350	<2.3	5.9	<23	<0.57	<0.57	<570	12.6	<5.7	9.9	14,000	5.6	1,530	62.3	<0.034	10.5	1,260	<2.3	<1.1	<570	<1.1	17.7	32.1	ND	0.0026	ND	ND	ND							
NB-22	4/24/2006	0-2	84.0	7.67	29.5	0.61	7,630	<2.4	16.0	106	<0.60	<0.60	953	67.6	9.6	79.7	40,800	60.4	2,600	246	0.95	22.8	1,840	<2.4	<1.2	<600	<1.2	28.7	122	0.129	0.0086	0.0207	ND	0.0062							
		2-4	90.1	7.21	40.3	<0.25	5,500	<2.2	21.3	179	<0.55	2.2	2,480	288	13.8	264	115,000	292	1,770	745	1.6	62.2	1,160	3.8	1.2	<550	<1.1	28.1	469	0.659	ND	ND	ND	ND							
		4-6	87.7	7.08	6.6	<0.25	4,840	<2.3	3.4	<23	<0.58	<0.58	<580	10.6	<5.8	13.1	12,500	5.6	1,650	67.2	<0.034	10.4	1,250	<2.3	<1.2	<580	<1.2	13.8	28.0	ND	ND	ND	ND	ND							
		6-8	86.4	5.36	3.4	<0.26	3,840	<2.3	4.3	<23	<0.57	<0.57	<570	7.9	<5.7	11.3	9,760	5.7	1,110	52.8	<0.035	7.7	1,010	<2.3	<1.1	<570	<1.1	11.0	22.6	ND	ND	ND	ND	ND							
		8-10	86.3	5.93	2.6	<0.27	4,080	<2.3	4.8	<23	<0.57	<0.57	<570	11.3	<5.7	10.9	12,400	5.2	1,190	58.8	<0.034	9.0	1,030	<2.3	<1.1	<570	<1.1	16.7	27.6	ND	0.0034 <sup>b</sup>	ND	ND	ND							
NB-23	4/24/2006	0-2	89.1	6.53	34.7	<0.25	5,150	<2.4	25.1	273	<1.1 <sup>c</sup>	2.1 <sup>c</sup>	3,350	341	19.0 <sup>c</sup>	397	170,000	774 <sup>c</sup>	2,180	1,590 <sup>c</sup>	2.1	113	969	6.9 <sup>c</sup>	<1.1	<1,100 <sup>c</sup>	<2.2 <sup>c</sup>	33.0 <sup>c</sup>	617	0.793	ND	ND	ND	ND							
		2-4	94.9	6.88	10.2	<0.24	4,280	<2.0	4.3	<20	<0.51	<0.51	<550	9.6	<5.1	10.7	14,200	5.4	1,420	65.8	<0.035	6.2	1,380	<2.0	<1.0	<510	<1.0	15.1	20.6	0.0432	0.0025	ND	0.0026	ND							
		4-6	86.4	6.63	22.6	<0.24	5,220	<2.3	6.2	35.3	<0.57	<0.57	<570	42.0	<5.7	45.7	25,700	41.6	1,800	169	0.41	15.4	1,510	<2.3	<1.1	<570	<1.1	17.8	77.8	0.204	0.0039	ND	0.0086	ND							
		6-8	89.1	5.83	11.4	<0.26	4,870	<2.3	5.0	<23	<0.57	<0.57	<570	14.3	<5.7	11.8	14,100	7.4	1,610	65.7	<0.035	7.1	1,510	<2.3	<1.1	<570	<1.1	16.2	19.9	ND	0.0022	ND	ND	ND							
		8-10	85.1	6.21	7.7	<0.27	4,510	<2.3	4.6	<23	<0.58	<0.58	<580	17.3	<5.8	17.8	14,500	12.6	1,540	83.0	<0.035	8.8	1,290	<2.3	<1.2	<580	<1.2	14.3	38.6	ND	0.0024	0.0017	ND	ND							
NB-24	4/24/2006	0-2	88.3	6.79	72.2	<0.25	5,510	<2.2	20.2	162	<0.56	1.5	2,040	265	11.7	269	104,000	281	1,700	682	1.6	58.3	1,200	3.9	1.1	<560	<1.1	28.0	407	0.671	ND	ND	ND	ND							
		2-4	95.7	6.54	39.8	<0.24	3,590	<2.0	4.1	<20	<0.51	<0.51	<510	8.6	<5.1	11.3	13,900	5.1	1,220	58.6	0.033	6.4	1,220	<2.0	<1.0	<510	<1.0	15.4	22.4	ND	0.0018	ND	0.0016	ND							
		4-6	86.1	6.05	6.3	<0.26	4,350	<2.3	4.4	<23	<0.58	<0.58	<580	10.8	<5.8	8.5	13,100	5.5	1,810	64.5	0.037	7.1	1,340	<2.3	<1.2	<580	<1.2	12.0	20.5	ND	0.0043	0.0024	ND	ND							
		6-8	68.9	6.70	9.5	<0.33	9,330	<2.9	12.7	45.5	<0.73	<0.73	<730	23.6	8.2	50.5	21,700	20.9	2,420	157	<0.049	16.5	1,960	<2.9	<1.5	<730	<1.5	26.3	52.5	ND	0.0174	0.0048	0.0154	ND							
		8-10	84.9	7.06	9.1	<0.28	11,300	<2.4	27.4	70.8	<0.59	0.64	1,430	47.0	8.5	128	24,200	69.0	3,620	192	0.043	22.7	2,090	3.0	<1.2	<590	<1.2	33.4	112	ND	0.0244	0.0627	ND	ND							
NB-25	4/24/2006	0-2	87.8	6.52	9.3	<0.26	5,130	<2.3	18.2	213	0.58	0.93	2,600	380	12.9	317	101,000	340	1,460	534	1.8	69.3	924	7.7	<1.1	<570	<1.1	43.6	506	0.770	ND	ND	ND	ND							
		2-4	90.6	6.92	28.6	0.76	14,100	<2.2	27.5	104	<0.55	<0.55	2,800	61.5	9.9	116	28,100	97.4	4,260	177	0.16	27.6	2,330	4.5	<1.1	<550	<1.1	47.2	71.7	0.136	0.0077	ND	0.0074	ND							
		4-6	65.9	6.33	27.6	<0.34	19,200	<3.0	47.6	100	0.84	0.96	1,990	49.3	12.8	194	41,200	82.0	5,240	368	1.2	35.6	3,910	6.5	<1.5	<760	<1.5	47.1	205	ND	ND	ND	ND	ND							
		6-8	87.5	5.65	6.7	0.42	6,230	<2.3	8.7	28.1	<0.57	<0.57	<570	17.7	<5.7	38.2	27,600	8.1	2,650	96.3	<0.036	11.5	2,020	<2.3	<1.1	<570	<1.1	21.4	35.6	ND	0.218 <sup>d</sup>	0.0372	ND	ND							
		8-10	86.6	5.57	4.6	<0.28	6,330	<2.3	3.4	<23	<0.58	<0.58	<580	15.9	<5.8	12.5	17,000	7.1	2,840	72.2	0.063	11.9	2,120	<2.3	<1.1	<580	<1.2	18.5	36.8	ND	0.0067	0.0046	ND	ND							
NB-26	4/26/2006	0-2	88.3	6.61	40.2	<0.26	5,680	<2.5	14.2	134	<0.62	<0.62	1,880	162	9.6	189	82,700	199	1,990	619	1.2	46.7	995	3.5	<1.2	<620	<1.2	28.0	287	0.323	ND	ND	ND	ND							
		2-4	92.8	5.41	15.6	0.27	5,510	<2.1	6.9	21.8	0.92	<0.53	<530	22.5	<5.3	37.2	23,600	12.3	1,260	104	0.058	10.0	1,240	<2.1	<1.1	<530	<1.1	29.5	32.6	ND	0.0062	ND	ND	ND							
		4-6	87.4	5.28	22.7	<0.27	11,100	<2.4	17.8	35.4	1.0	<0.60	<600	112	<6.0	22.9	52,900	22.9	2,290	85.5	0.23	12.0	2,700	<2.4	<1.2	<600	<1.2	80.5	49.1	ND	0.0195	0.0035	ND	ND							
		6-8	88.8	6.																																					

Table B-2- Restricted Area Data Table  
Hess Corporation- Port Reading Refinery  
750 Cliff Road

Port Reading, Middlesex County, New Jersey  
North Landfarm Soil Sampling Summary

					Volatile Organics								Base Neutrals												
Sample Location	Sample Date	Sample Depth	Elevation above mean sea level (msl) in feet	Solids, Percent	Acetone (CAS # 67-64-1)	Benzene (CAS # 9072-35-9)	2-Butanone (MEK) (CAS # 78-93-3)	Carbon disulfide (CAS # 75-15-0)	Ethylbenzene (CAS # 100-41-4)	Methylene chloride (CAS # 75-08-2)	Toluene (CAS # 108-88-3)	Xylene (total) (CAS # 1330-20-7)	Total TIC, Volatile	Benzo(a)anthracene (CAS # 56-55-3)	Benzo(a)pyrene (CAS # 50-32-8)	Benzo(b)fluoranthene (CAS # 205-99-2)	Chrysene (CAS # 218-01-9)	Dimethyl phthalate (CAS # 84-66-3)	bis(2-Ethylhexyl)phthalate (CAS # 117-81-7)	Fluoranthene (CAS # 206-44-0)	Phenanthrene (CAS # 85-01-8)	Pyrene (CAS # 129-00-0)	1,2,4-Trichlorobenzene (CAS # 120-82-1)	Total TIC, Semi-Volatile	
NRDCSCC			--	--	1000	13	1,000	--	1,000	210	1,000	1,000	--	4	0.66	4	40	1,000	210	10,000	---	10,000	1,200	--	
RDCSCC			--	--	1000	3	1,000	--	1,000	49	1,000	410	--	0.9	0.66	0.9	9	1,000	49	2,300	--	1,700	68	--	
IGWSCC			--	--	100	1	50	--	100	1	500	67	--	500	100	50	500	50	100	100	--	100	100	--	
NLF-1	10/27/2009	(0-2)	(9-7)	80.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0153 J	ND	0.0125 J	0.0172 J	ND	ND	0.0261 J	ND	0.0258 J	ND	0.99 J	
		(2-4)	(7-5)	90.1	ND	ND	ND	0.00076 J	ND	ND	0.0086	ND	ND	ND	ND	ND	ND	ND	0.0627 J	ND	ND	ND	ND	0	
		(4-6)	(5-3)	82.2	ND	ND	ND	0.00086 J	ND	ND	0.0017	ND	ND	ND	ND	ND	ND	ND	0.0415 J	ND	ND	ND	ND	0.42 J	
		(6-8)	(3-1)	85	ND	ND	ND	0.0018 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0	
		(8-10)	(1-(-1))	87.9	ND	ND	ND	0.0051	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0	
NLF-2	10/27/2009	(0-2)	(10-8)	86.6	0.0343	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.560 J	
		(2-4)	(8-6)	89.4	0.02900	ND	ND	0.0018 J	ND	ND	0.0042	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.560 J	
		(4-6)	(6-4)	88.5	0.0148	ND	ND	0.0012 J	ND	ND	0.00043 J	ND	ND	ND	ND	ND	ND	0.0498 J	ND	ND	ND	ND	ND	4.540J	
		(6-8)	(4-2)	87.8	0.0053 J	ND	ND	0.0015 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0405 J	ND	ND	ND	ND	1.670 J	
		(8-10)	(2-0)	81	0.0068 J	ND	ND	0.0021 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0473 J	ND	ND	ND	ND	ND	1.480 J	
NLF-3	10/27/2009	(0-2)	(9-7)	66.3	0.0411	ND	ND	0.0039 J	ND	ND	ND	ND	ND	0.0231 J	0.0146 J	ND	0.0209 J	ND	ND	0.0208 J	ND	0.0345 J	ND	2.40 J	
		(2-4)	(7-5)	67.6	0.0389	ND	ND	0.0031 J	ND	ND	0.0012 J	ND	ND	ND	ND	ND	ND	0.0142 J	ND	0.0791 J	0.0201 J	ND	0.0258 J	ND	15.10 J
		(4-6)	(5-3)	73.2	0.0191	ND	ND	0.0017 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0185 J	ND	10.790 J	
		(6-8)	(3-1)	66	0.0377	ND	ND	0.0044 J	ND	ND	0.0008 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.660 J	
		(8-10)	(1-(-1))	80.1	0.0385	ND	ND	0.0017 J	ND	ND	ND	0.0009 J	0.039 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.370 J	
NLF-4	10/27/2009	(0-2)	(9-7)	82.7	ND	ND	ND	ND	ND	ND	0.0010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0	
		(2-4)	(7-5)	79.2	ND	ND	ND	0.0012 J	ND	ND	ND	ND	ND	0.0167 J	0.0117 J	ND	0.0142 J	ND	ND	0.0253 J	ND	0.0293 J	ND	0.600 J	
		(4-6)	(5-3)	82.8	ND	ND	ND	0.0021 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.420 J	
		(6-8)	(3-1)	74.7	0.104	ND	0.0177	0.0010 J	ND	ND	0.0019	0.0010 J	0.0387 J	0.0221 J	0.0158 J	0.0183 J	0.0253 J	ND	ND	0.0373 J	0.0182 J	0.047	ND	35.490 J	
		(8-10)	(1-(-1))	68.5	0.0939	ND	0.0141 J	0.0019 J	ND	ND	0.0010 J	ND	0.0010 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.170 J	
NLF-5	10/27/2009	(0-2)	(9-7)	77.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0	
		(2-4)	(7-5)	46.3	ND	ND	ND	0.0020 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.440 J	
		(4-6)	(5-3)	87.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0	
		(6-8)	(3-1)	70.9	0.0283	ND	ND	0.0159	ND	0.0043 J	0.0023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.170 J	
		(8-10)	(1-(-1))	88.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0	

IGWSCC= Default Impact to Groundwater Soil Screening Level  
RDCSCC= Residential Direct Contact Soil Remediation Standard  
NRDCSCC= Non-Residential Direct Soil Remediation Standard  
CAS = Chemical Abstract Service Number

ND= Non Detect  
NA= Not Applicable  
NR= Not Reported

All Results in mg/kg unless otherwise noted  
J- Represents Estimated Concentration  
- Method Detection Limit Greater then IGWSCC

- Sample Above IGWSCC but Below NRDCSCC and RDCSCC  
- Sample Above RDCSCC but Below NRDCSCC  
- Sample Above NRDCSCC

Table B-2 Restricted Area Data Table  
Hess Corporation- Port Reading Refinery  
750 Cliff Road

Port Reading, Middlesex County, New Jersey  
North Landfarm Soil Sampling Summary

			Metals																								Pesticides		
Sample Location	Sample Date	Sample Depth	Aluminum (CAS # 7249-90-5)	Antimony (CAS # 7440-36-0)	Arsenic (CAS # 7440-38-2)	Barium (CAS # 7440-39-3)	Beryllium (CAS # 7440-41-7)	Cadmium (CAS # 7440-43-9)	Calcium (CAS # 7440-47-3)	Chromium (CAS # 7440-47-3)	Cobalt (CAS # 7440-48-4)	Copper (CAS # 7440-50-8)	Cyanide (CAS # 74-90-8)	Iron (CAS # 7439-89-6)	Lead (CAS # 7439-92-1)	Magnesium (CAS # 7439-95-4)	Manganese (CAS # 7439-96-5)	Mercury (CAS # 7439-97-6)	Nickel (CAS # 7440-02-0)	Potassium (CAS # 7440-09-7)	Selenium (CAS # 7782-49-2)	Silver (CAS # 7440-22-4)	Sodium (CAS # 7440-23-5)	Thallium (CAS # 7440-28-0)	Vanadium (CAS # 7440-62-2)	Zinc (CAS # 7440-66-6)	4,4'-DDD (CAS # 72-54-8)	4,4'-DDE (CAS # 72-55-9)	4,4'-DDT (CAS # 50-29-3)
NRDCSCC			--	340	20	47,000	140	100	--	--	--	600	21,000	--	600	--	--	270	2,400	--	3,100	4,100	--	2	7,100	1,500	12	9	8
RDCSCC			--	14	20	700	16	39	--	--	--	600	1,100	--	400	--	--	14	250	--	63	110	--	2	370	1,500	3	2	2
IGWSCC			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	50	50	500
NLF-1	10/27/2009	(0-2)	4,620	<2.4	9.8	40.1	<0.59	0.79	<590	19.8	<5.9	17.3	<0.30	24,400	18.0	1,490	85.3	0.18	10.0	<1,200	<2.4	<1.2	<1,200	<1.2	26.7	48.3	0.0208	0.0048	ND
		(2-4)	2,720	<2.2	2.5	<22	<0.56	<0.56	<560	7.5	<5.6	6.6	<0.24	9,940	4.8	1,010	40.4	<0.033	4.8	<1,100	<2.2	<1.1	<1,100	<1.1	11.6	14.0	0.0041	ND	ND
		(4-6)	2,950	<2.3	2.3	<23	<0.58	<0.58	976	10.2	<5.8	14.0	<0.29	13,800	7.6	959	62.8	0.073	6.4	<1,200	<2.3	<1.2	<1,200	<1.2	11.4	58.3	0.002	ND	ND
		(6-8)	3,050	<2.5	4.0	<25	<0.61	<0.61	<610	10.7	<6.1	9.9	<0.26	12,200	5.1	1,080	55.2	<0.034	5.3	<1,200	<2.5	<1.2	<1,200	<1.2	11.4	16.1	ND	ND	ND
		(8-10)	3,000	<2.2	<2.2	<22	<0.55	<0.55	<550	8.3	<5.5	9.4	<0.26	8,430	3.4	932	46.8	<0.037	6.8	<1,100	<2.2	<1.1	<1,100	<1.1	9.3	22.5	0.0059	0.0018	ND
NLF-2	10/27/2009	(0-2)	4,870	<2.3	6.2	<23	<0.58	<0.58	<580	30.0	<5.8	19.1	<0.25	23,500	9.8	1,660	93.9	0.095	9.7	<1,200	<2.3	<1.2	<1,200	<1.2	25.6	25.6	0.0141	0.0028	0.0047
		(2-4)	4,670	<2.3	6.7	<23	<0.58	<0.58	<580	32.5	<5.8	16.4	<0.25	20,600	7.9	1,590	78.3	0.060	8.1	<1,200	<2.3	<1.2	<1,200	<1.2	26.8	28.3	0.0201	0.0024	ND
		(4-6)	4,510	<2.2	4.2	<22	<0.55	<0.55	742	14.2	<5.5	13.4	<0.24	21,200	8.2	1,680	91.2	<0.032	9.4	<1,100	<2.2	<1.1	<1,100	<1.1	19.3	31.4	ND	0.0016	ND
		(6-8)	3,220	<2.4	3.1	<24	<0.59	<0.59	<590	8.6	<5.9	13.0	<0.24	10,900	2.8	1,080	62.6	<0.037	6.0	<1,200	<2.4	<1.2	<1,200	<1.2	11.3	18.2	0.0015	ND	ND
		(8-10)	7,060	<2.4	13.2	34.0	<0.61	<0.61	667	22.4	<6.1	27.8	<0.29	31,900	22.1	2,200	92.7	0.081	10.0	2,500	<2.4	<1.2	<1,200	<1.2	31.1	36.0	0.0020	ND	ND
NLF-3	10/27/2009	(0-2)	13,200	<2.0	18.8	41.1	0.51	0.74	911	32.4	7.5	42.4	<0.34	32,100	32.1	3,700	225	0.099	20.6	2,350	<2.0	<1.0	<1,000	<1.0	40	81.3	0.0045	ND	ND
		(2-4)	8,260	<2.2	9.2	28.7	<0.55	<0.55	1,040	20.6	<5.5	24.7	<0.32	22,100	20.5	2,990	165	0.11	13.8	1,590	<2.2	<1.1	<1,100	<1.1	25.4	50.5	ND	ND	ND
		(4-6)	10,700	<2.1	9.9	37.6	0.62	<0.53	895	24.7	7.7	32.9	<0.31	24,900	24.7	3,510	229	0.23	21.5	1,960	<2.1	<1.1	<1,100	<1.1	31.9	81.1	0.0030	ND	0.0062
		(6-8)	15,500	<2.0	7.4	51.6	0.67	0.92	2,710	30.8	8.2	12.7	<0.33	53,700	8.9	5,740	477	0.078	21.9	2,940	<2.0	<1.0	1,330	<1.0	35.6	65.6	ND	ND	ND
		(8-10)	8,350	2.4	10.9	34.1	<0.59	0.88	1,250	20.7	6.6	22.6	<0.30	47,800	10.4	2,750	267	0.14	15.3	<1,200	<2.4	<1.2	<1,200	<1.2	40.2	51.7	0.0032	0.0019	ND
NLF-4	10/27/2009	(0-2)	2,550	<2.4	<2.4	<24	<0.60	<0.60	<600	7.6	<6.0	6.8	<0.25	11,700	4.4	984	49.8	<0.036	5.9	<1,200	<2.4	<1.2	<1,200	<1.2	10.8	17.4	ND	ND	ND
		(2-4)	5,130	<2.1	4.8	34.7	<0.53	0.58	<530	15.2	7.9	27.0	<0.26	17,500	10.1	2,340	98.7	0.047	16.5	<1,100	<2.1	<1.1	<1,100	<1.1	18.1	47.3	0.0039	0.0021	ND
		(4-6)	3,260	<2.4	2.6	<24	<0.60	<0.60	<600	9.3	<6.0	10.5	<0.27	11,100	4.2	1,170	47.0	<0.039	10.6	<1,200	<2.4	<1.2	<1,200	<1.2	11.7	30.0	0.0024	ND	ND
		(6-8)	9,630	<2.0	9.5	33.4	<0.50	<0.50	957	21.8	6.2	29.2	<0.27	24,700	19.9	3,160	218	0.14	15.5	1,770	<2.0	<1.0	<1,000	<1.0	26.5	54.3	0.0036	0.0033	ND
		(8-10)	12,300	<2.2	10.1	41.3	0.60	0.57	1,230	27.4	7.7	32.0	<0.35	27,700	20.1	4,230	233	0.13	18.9	2,250	<2.2	<1.1	<1,100	<1.1	32.5	63.8	0.0022	0.0019	ND
NLF-5	10/27/2009	(0-2)	8,190	<2.0	6.4	36.7	<0.50	<0.50	<500	21.6	<5.0	23.8	<0.26	22,100	18.7	2,630	106	0.13	11.7	1,700	<2.0	<1.0	<1,000	<1.0	24.9	35.8	0.0027	ND	0.0023
		(2-4)	13,900	<2.0	13.6	45.7	0.62	0.78	1,560	36.7	10.5	78.9	<0.44	21,600	28.8	3,000	116	0.34	28.1	2,490	<2.0	<1.0	<1,000	<1.0	43.2	85.2	0.0027	ND	ND
		(4-6)	3,510	<2.3	4.4	<23	<0.58	<0.58	<580	10.3	<5.8	10.0	<0.23	15,100	10.3	1,370	61.8	<0.037	6.6	<1,200	<2.3	<1.2	<1,200	<1.2	14.9	19.8	0.0015	ND	ND
		(6-8)	9,550	<2.0	5.6	37.6	<0.50	<0.50	944	23	<5.0	30.1	<0.33	14,400	18.2	2,040	77.8	0.32	10.7	1,800	<2.0	<1.0	<1,000	<1.0	28.1	30.3	0.0053	ND	ND
		(8-10)	3,130	<2.2	3.5	<22	<0.56	<0.56	<560	8.4	<5.6	10.6	<0.23	16,000	2.5	1,180	69.6	<0.033	6.5	<1,100	<2.2	<1.1	<1,100	<1.1	14.3	20.0	ND	ND	ND

IGWSCC= Default Imp:  
RDCSCC= Residential  
NRDCSCC= Non-Reside  
CAS = Chemical Abstrac

IGWSCC= Default Impact to Groundwater Soil Screening Level  
RDCSCC= Residential Direct Contact Soil Remediation Standard  
NRDCSCC Non-Residential Direct Soil Remediation Standard

ND= Non Detect  
NA= Not Applicable  
NR= Not Reported

All Results in mg/kg unless otherwise noted  
J- Represents Estimated Concentration  
- Method Detection Limit Greater then IGWSCC

- Sample Above IGWSCC but Below NRDCSCC and RDCSCC  
- Sample Above RDCSCC but Below NRDCSCC  
- Sample Above NRDCSCC

## **EXHIBIT C**

### **Deed Notice as Institutional Control and Impermeable Cap and Fence as Engineering Control**

#### **Exhibit C-1: Institutional Control**

##### **Exhibit C-1(A): Description and Estimated Size**

The North Landfarm is located along the northeast boundary of the refinery property, the dimensions are approximately 145-feet (ft) long by 100-ft wide, and it is bounded on all sides by raised earthen dikes. The North Landfarm was formed in 1974 by constructing an orthogonal above-grade earthen dike in the northwest corner of the existing dike protected area around Tank 7945.

The ground surface elevation within the North Landfarm ranges from 10.5- to 12.5-ft above mean sea level (msl) as defined by the National Geodetic Vertical Datum of 1929. The elevation of the top of the earthen dike is 18-ft. The 100-year flood level at the HC-PR facility is 10-ft above msl.

##### **Exhibit C-1(B): Description of Restrictions on Property**

By operation of this Deed Notice, an impermeable cap will be installed over the entire area of AOC-1 the North Landfarm and surrounded by a 5-ft high fence enclosing the area, a 30-year Post Closure Monitoring Program will be instituted, with monthly inspection of the cap and fence.

##### **Exhibit C-1(C): Objective of Restrictions**

The Deed Notice serves to notify current and future site occupants of the presence of the Landfarm as well as the Engineering control. The impermeable cap will reduce or eliminate the migration of constituents and function as infiltration control, erosion and runoff control, as well as wind erosion control. The fence will serve as a physical barrier to control access to the restricted area.

#### **Exhibit C-2: Engineering Control – Impermeable Cap and Fence**

##### **Exhibit C-2(A): General Description of Engineering Control**

The engineering control includes an impermeable cap consisting of geosynthetic clay liner acting as a hydraulic barrier. The cap control measures approximately 145-ft by 100-ft, with a final thickness of 3-ft. The cap will be covered with 1.5-ft of soil as a drainage layer, and 0.5-ft of 3-inch aggregate as a physical barrier. The total area is approximately 14,500-square ft (0.332 acre). Post-capping a 5-ft high fence will be installed surrounding the area, with Entry Limited by a locked gate. Signs will be located on all sides of the fence, which will read "Authorization Required for Entry" or similar appropriate wording. .

Monthly inspections will be undertaken for the duration of the 30-year Post Closure Monitoring Plan. The inspector will be check for signs of damage and deterioration, when necessary, corrective actions will be undertaken to remain the integrity of the fence. A logbook will be kept, detailing the dates and details of inspections, along with any corrective actions taken. Inspections will be conducted by an individual familiar with post-closure care requirements.

##### **Exhibit C-2(B): Objective and Function of Impermeable Cap and Fence**

The impermeable cap will reduce or eliminate the migration of constituents and function as infiltration control, erosion and runoff control, as well as wind erosion control. The fence will serve as a physical barrier to control access to the restricted area.